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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

Vol. VIII, No. 9. Washington, D. C. March 3, 1924.

WHERE DO TRAFFIC ACCIDENTS OCCUR MOST FREQUENTLY?

By E. W. Kelley, Washington

An interesting table in which the traffic accidents occurring during 1922 and 1923 in the State of Wisconsin recently appeared in the Engineering News Record. The table analyzed 2,980 accidents. Where did they occur?

Location of accidents		Per cent
On straight roads	2,044	68.6
At curves and corners	479	16.
At railroad crossings	179	6.
At crossroads	138	4.6
On hills	34	1.2
At miscellaneous places	107	3.6

Does this mean that all roads should be built crooked in order to reduce the number of accidents? Of course not.

The same article implies that more accidents occur on double-track roads, and wider, than on the narrower thoroughfares. Does this mean again that all roads should be built narrow? No, again. If not, what do these statistics mean? Simply this, is it not, that regardless of the class of road built a toll of accidents is unavoidable? And furthermore, that general statements regarding the relatively greater safety to travelers afforded by straight roads as compared with crooked roads, or by wide roads as compared with narrow ones, is not borne out by facts. Probably what is true in Wisconsin holds good in other States. If so, then what is there to all this "noise," as Granger would say, about the danger of the 9-foot road, of which there are many hundreds of miles in each district outside of those constructed by the Forest Service?

If the danger argument is not sound what other valid objections are there to the present road policy? Is difficulty of maintenance a sound one? Or can it be attacked justly from the standpoint that the specifications do not provide sufficient speed?

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SHEEP DAMAGE

By G. A. Pearson, D-3

"What Sort of an Animal Caused this 'Sheep Damage'?" is the title of an article by W. R. Chapline in the Service Bulletin of January 28. Having studied the yellow pine reproduction problem in District 3 since 1908, I cannot refrain from expressing myself on this subject.

The admission by a grazing man that sheep injure pine seedlings, even though this admission be qualified, is a hopeful sign. It is undoubtedly true that sheep do more damage to pine seedlings where good sheep feed is scarce than where it is abundant. It is probably also true, as has been stated by indulgent grazing officers, that excessive damage is usually due to improper adjustment between the number and kind of stock and the amount of palatable forage. In District 3, however, no one seems to know how to "adjust" either sheep or forage in such a way that an old ewe will look with disdain upon a succulent pine shoot.

In the second paragraph we read:

"Livestock have been blamed and are being blamed for injury which close observations would distinctly prove they had little influence on. Injury by tip moth, other insects, rodents, porcupines, birds, and other agencies, have all been laid to livestock."

Whether the person guilty of these indiscriminate accusations was the Chief of Forest Management, the District Research Officer, the Ranger, or the green Forest Assistant, is not made clear. Usually, however, the Forest Service does not take action in cases of this kind without competent technical advice; in fact, it has been my experience that nothing short of absolute proof is accepted where sheep interests are involved. The inference, therefore, is that seasoned research men and others in responsible positions have failed to distinguish between damage by sheep and that of the tip moth, porcupine and other agencies mentioned. The work of the tip moth is so distinctive that it can readily be identified by any investigator who takes the trouble to step out of his flivver. How any Forest officer could possibly attribute the work of porcupines and squirrels to sheep is beyond my comprehension.

I agree with Brother Chapline that any action contemplating the exclusion or reduction in numbers of stock should be goverened by reason and thorough investigation of the facts. I know of no instance in which the Forest Service has violated these principles; but I am personally familiar with tens of thousands of acres of yellow pine land which have failed to restock after cutting for no other reason than sheep grazing. I realize that it takes time to bring about the needed changes. If 5 or even 10 years are required, all well and good, provided the silvicultural objective is kept clearly in view instead of letting matters drift from bad to worse. In my opinion our great danger lies not in firm but in lax grazing administration. Side-stepping our responsibilities as foresters will not help the stock industry but will surely bring public condemnation upon the Forest Service.

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COURT SUSTAINS CROSSING REGULATIONS

By W. C. Barnes, Washington

The fact that our regulations providing for crossing permits to cross the National Forests are perfectly legal is again established by a recent decision of the United States District Court at Portland, Oregon.

Two sheepmen, Mark Angland and Jerry Ahern, applied to the Supervisor for crossing permits, which were refused because the sheep were known to be affected with scab and the owners could not secure a clean bill of health from the Federal inspectors. In spite of this fact the two men drove their bands of sheep across the Fremont Forest. They were arrested, and on the trial at Portland the Court fined each $500 and costs. It is believed that these costs will be almost as much as the fine itself. This severe punishment will undoubtedly result in increasing respect for the grazing regulations in the vicinity of the Fremont Forest, where there has been considerable opposition to our policies by transient owners using public domain ranges adjacent to the National Forests.

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RECOGNITION FOR OLD-TIMERS ADVOCATED

By K. G. Brown, Uncompahgre

After reading Mr. Guthrie's article on the front page of the issue of January 28, I am moved to want to throw in with him on the subject, inasmuch as my persuasion is that he has the right idea; for while perhaps not yet eligible to be classed as an "Old-Timer" in the Service, I trust it may be with pardonable pride when I say I hope some day to be numbered among such.

My acquaintance and association with some of the Old-Timers in the Service have assuredly been helpful to me in many ways, and I must concur in the feeling that they are a most modest lot with regard to their years of service and have no desire to advertise the fact. Likewise, it is they who have borne the burden and heat of the day without the hope of reward other than that of personal satisfaction of work well done and results accomplished. These are the men who have created and upheld the esprit de corps that is the pride and honor of the Service.

Why, then, should there not be some mark of such length of loyal and faithful service? Who will say they would not be proud to wear it and rightly so? Like our Japanese friend, Hashimuro Togo, "I inquire to know." Let the pacifists and anti-militarists rave on! That's about all they ever do anyhow, so why heed them or try to prevent it?

If the powers that be who made it regulation for many other branches of the Government service, as well as other services in commercial life, to wear service stripes on the uniform there must undoubtedly have been good reason for it and it seems to be unquestioned. So, by the same token, why should the Forest Service be the one Government uniformed service (or one of the few) that has not adopted service stripes as standard or regulation? Is it reasonable to suppose that a man in any line of business or work who has served for a term of years faithfully and well would be in the least ashamed for the world at large to know it, or would it be unpardonable in him to be just a little proud of his honorable service?

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TIMBER FARMERS OR OPERATION MECHANICS.

By Roy Headley, Washington

In the Washington office free-for-alls, a respectable minority - or maybe it's a majority - maintains that fire control and other Operation work is pushed so hard that Supervisors and others tend to become head operation mechanics driven by the fear that they will be criticized because their plans and standards and routine activities will be found defective when the Inspector comes around. Supervisors are said to be so hard-pressed for results in the mechanics of administration that they are not able to be interested in and thinking about timber farming possibilities on the land they are in charge of. Everybody agrees that timber farming is our main job. But some men in the Atlantic Building think the main job is being neglected for the incidentals - can't see the woods for the trees, so to speak.

It does seem like timber farming holds a prominent place in the interests of but few men. It would be interesting to know whether this is due to the pressure of administrative work or because timber production is somehow not as interesting as other things.

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SPRUCE AND FIR REPRODUCTION STUDY IN THE NORTHEAST

By M. Westveld, Northeastern Exp. Station

In connection with the study of growth and yield of red spruce in the Northeast, data are also being secured on the reproduction coming in on the spruce cut-over lands in an effort to determine the future composition of the stand. Strips were run on a number of plots established in the spruce flat type and all seedlings recorded by species and height. By analysing a large number of seedlings it was possible to draw up a table showing the age of seedlings at various heights up to five feet. These data showed that, generally speaking, the reproduction on the cut-over area covered by the study so far is abundant. However, the study indicates that practically all the reproduction present has come in since cutting, with the exception of white pine. The spruce flats have been severely cut over for spruce and fir pulpwood, only occasional spruce and fir trees being left which will exceed five inches in diameter; hence, no seed is being produced of these species. Considerable seed-bearing white pine comprise the residual stand, and these, acting as seed trees, have resulted in the establishment of numerous one, two, and three-year old white pine seedlings. Most of the hardwood reproduction, consisting of paper birch, yellow birch, red maple, sugar maple, poplar, beech, and pin cherry, has come in within the past three years or since the cutting took place. An analysis of the figures shows a total of 10,183 seedlings per acre. Of this amount 58 per cent consists of coniferous reproduction, a negligible amount of which has come in since cutting took place, while the balance of 42 per cent consists of hardwood reproduction, nearly all of which has come in within the past three years. What the eventual composition of the stand will be remains to be seen. The hardwood reproduction during the past three years has been on a rapid increase, while the coniferous reproduction is at a practical standstill, there being an almost total absence of seed-bearing spruce and fir. The hardwoods not being utilized in this region produce immense quantities of seed each year, which accounts for the presence of such an abundance of hardwood seedlings in such a comparatively short period of time. It can readily be seen that the forester is up against a hard problem in attempting to maintain a coniferous stand when the utilization of spruce and fir for pulpwood is practiced to such a fine degree and no attempt is made to remove and utilize the hardwood stand.

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WASHINGTON NOTES

Burkholder - Chess Champion: By defeating Gill in a snappy game that lasted not more than five hours, Ed Burkholder, demon of the checkered square, emerged from the recent chess tournament with a perfect score. Gill has filed a protest, however, and claims that if Burkholder would abstain from smoking soft coal during the games it would be easier for competitors to retain consciousness until the end. This protest has been disallowed by adjudicator Carter on the ground that "It's a tough pastime at best." Gill still protests, for Carter smokes worse material and is, therefore, prejudiced.

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"Thems Our Sentiments Too": The Branch of Grazing occasionally runs across items in the annual reports which are really inspirations. The following is an excellent example, taken from the grazing report of the Supervisor of the Lolo Forest in Montana:

"In looking over the old records it seems that the statement occurs too often that grazing is not a major activity on the Lolo. The fact remains that grazing is the second largest use on the Forest. It brings in the second largest receipts, and affects more of the local people adjacent to the Forest than any other activity.***

"In the past two years Grazing Guards have been provided. During the past year, at least, too much of their time has been spent in packing supplies to improvement camps and in doing other improvement work. *** I believe we should make a greater effort to use their entire time in counting, posting driveways, posting allotments, posting and protecting closed areas, looking out new routes and unused areas, and gathering as much definite information in the way of periods used, losses, methods of handling, failures to follow the three-night bed rule, and other instructions regarding the use of the range, as these men in their varying capacities can secure."--W.C.B.

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FOREST PRODUCTS LABORATORY

Human Hair Found in Paper Stock: "A microscopical examination shows the fibers to be of animal origin and probably human hair. There was also present a human eyelash, which, however, may be adventitious. The fibers are not of vegetable origin like jute, manila, or sisal." First paragraph of a laboratory report on a paper sample.

Sounds like a case for a prosecuting attorney, but grewsome apprehensions were quieted on reading further that "if any old paper is used in your process that is the most probable source of contamination" or that the foreign matter may be introduced through the water supply.

Another idea for a startling news item demolished!

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Paper and Paper Products Made from Wood: Papers made from wood pulp embrace the five general classes of printing papers, writing papers, wrapping papers, boards, tissue specialties.

The first three types are represented by a fairly limited number of representatives; the two latter types cover a large variety of products.

The principal printing papers are newsprint, book, magazine, lithographic, mimeograph, catalogue, etc. Writing papers include bond, ledger, and note, and a few similar papers. Wrapping papers, including kraft and bag papers, cover a large number of papers of all sorts used as wrappers, but largely made from wood pulp.

Boards of various kinds are used in building, in the manufacture of cartons, boxes and containers of all kinds, for binding, trunks, electrical equipment, chair seats and all manner of specialties. The tonnage of boards exceeds that of all other papers manufactured.

A partial list shows that there are manufactured more than thirty special papers, such as absorbent, building, cigarette, roofing, etc.; even an incomplete list of articles made from paper totals over 50 items and includes such products as bags, baskets, bells (Christmas), buckets, bottles, bottle caps, boxes, cartons, etc.

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FOREST EXPERIMENT STATION

News on Forestry in New Zealand: A recent letter to Zon from Prof. Wm. R. McGregor of Aukland University College, New Zealand, brings news of forestry in that country.

Through the efforts of Prof. McGregor a Department of Forestry has been established there and he is concerned with a study of the relation of light to the development of the Kauri forests of northern New Zealand. In this connection he finds that American forestry literature is scarce in that country and asks for a reprint of "A New Explanation of the Tolerance and Intolerance of Trees" by Zon, published in the Proceedings of the Society of American Foresters in 1904.

The new forestry department will devote most of its time to studies of general ecological and purely silvicultural problems.

Prof. McGregor states that forestry in New Zealand is still very much in its infant stage and that one of their chief problems is to keep abreast of current literature on forestry. He asks help in the form of information, occasionally, on the progress of forestry in the United States and hopes that New Zealand will soon be able to make contributions to forestry literature.--A.E.W.-Lake States Exp. Sta.

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DISTRICT 1 - NORTHERN DISTRICT

Koch's Article Endorsed: Assistant District Forester Koch has a very interesting illustrated article in the "Four L" Bulletin of February, 1924, on reforestation in the Idaho white pine. Of this article, Mr. C. L. Billings, representing the Coeur d'Alene Timber Protective Association of Coeur d'Alene, Idaho, says: "We can subscribe almost wholly to everything Mr. Koch has said." The acceptance by lumbering interests of a statement by a forester on forestry measures would have been surprising a decade ago. That such support is generally accepted as a matter of fact speaks eloquently of the progress of forestry extension in the District.--M.H.W.

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Articles for "Field and Stream": The Managing Editor of "Field and Stream," internationally known sportsmen's periodical which founded the Audubon Society, has asked the Forest Service of District 1 for a series of brief articles on auto-camping in the National Forests.

Beginning in February this magazine is going to run a larger section devoted to camping, stressing in particular auto camping. A couple of articles descriptive of side trips from the Yellowstone Highway have been submitted with a view to getting more definite information as to just what the magazine desires. It is possible that a series of such articles will then be furnished, in which there will be an opportunity to bring out the recreational features of the National Forests that are open to the tourist public. Many of these articles will be prepared by Supervisors.

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Increase in Special Use Permits: The receipts from special uses in District 1 for the first half of the fiscal year 1924 were $4,245.63, an increase of more than $2,000 over the same period last year. Since payments for permits in force are not due until January 1, it is safe to say that the greater portion represents an increase in new business over the amount of new business for the same period in the preceding year.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Split Grazing Fees: An analysis of the split grazing fee plan for 1923 in District 2 shows that an average of 60.7% of all permittees having single payments paid on time; 58.3% of those having divided payments paid the first half on time, and 62.6% the second half on time. An average of 46.8% of the permittees paid first and second halves at the time of the first installment.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Planting of Denuded Areas: A recent report on the areas within the District which will not restock with forests within 50 to 75 years and should be planted has gone to the Forester. It shows a total of 333,860 acres which are in need of planting; 132,810 acres are in the yellow pine type, 105,200 acres in Douglas fir, and 95,850 in spruce. Of the total, 129,060 acres were restocking with aspen but should be planted with conifers. The areas are located on the Apache, Carson, Coconino, Lincoln, Manzano and Santa Fe Forests. Planting on a large scale offers many difficulties. No funds are now available and planting will be very expensive - about $15 per acre. Since the planting season is only about a month each year, it may be hard to get labor for large jobs. The District, however, is lucky in having done enough experimental work in planting so that it is believed successful work can be done as soon as funds are available. A large planting program would necessitate the establishment of two forest nurseries, one probably at Fort Valley for yellow pine and another possibly near Cloudcroft on the Lincoln for Douglas fir and spruce.

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The Carson Scores: In the rush of keeping heads above water in the administration of forests, the collection of data to advance the practice of forestry is often lost sight of. But the Carson is not overlooking any bets as shown by the following from the Supervisor: "Last spring we collected volume table data on 1000 western yellow pine trees. We plan to obtain additional stem analysis this month from western yellow pine and, later on in the year, to start work on the Engelmann spruce and cork bark fir volume tables." The importance of this work is apparent from the facts that the Coconino western yellow pine tables do not fit northern New Mexico conditions and that no tables for the other species now exist in the District.

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A Trespasser Comes Back: In reply to a Supervisor's letter notifying a trespasser of a grazing trespass and asking him for a statement of his side of the case, he states among other things: "That i claim damages and slander in the sum of ($2500.00) Two thousand and five hundred dollars. Now in the presents of the Everlasting God the creator of this world and all that is in it by his name only i do solemnly swear the foregoing statement is the truth the whole truth and nothing but the truth so help me God." He does not state from whom he desires to collect the $2500 but if from the Supervisor he's in hard luck, for we understand that the Supervisor's funds are tied up in a defunct bank.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Lawbreakers: Stockmen of Escalante report having seen eight Navajos on the Fifty-Mile Mountain recently who had been making a wholesale slaughter of the deer in that vicinity. It seems from the report that the Indians cross the river at what is known as The Hole in the Rocks and kill deer on this side at any time in the year.

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Wild Horses: Wild horses have become rather bothersome on the Powell National Forest. Accordingly the Coyote Cattle Grazing Association recently staged a round-up and brought some 70 horses into the stray pen. Thirty-five of these were claimed, the other 35 remaining in durance vile. One old mare died and left for greener pastures, leaving 34 in the pen. The officer in charge incurred expense in feeding and caring for the animals, and in accordance with law sold a number of them to cover this expense. Four were disposed of in this way at a price ranging from 25¢ to $25. This tremendous sale apparently saturated the local market, leaving 30 horses in the pen to be cared for and fed. This cost money, but no more horses can be sold on account of the lack of buyers. The pound keeper accordingly jumps the Forest Service for expenses and succeeds in getting a certain amount out of the local force. The assistant to the Solicitor has looked into the matter and learns that the pound keeper had no right to jump the Forest Service for payment of his expenses, but that it is up to him to dispose of the animals and square himself in that way. Under the present circumstances it looks as though the pound keeper would be loath to accept any more horses in this way. According to law he must do so, however, and if he refuses to accept them he may be charged with malfeasance of office, which probably means he will have to throw up his job. If he did so under these circumstances, probably no one would take it. So there you are, and the wild horses continue to eat the grass.

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DISTRICT 5 - CALIFORNIA DISTRICT

Forest Service Secures Backing: At the meeting of the Playground and Recreation Association executives of California, held at Stockton on December 1, 1923, following an address given by the District Forester, the following resolution was passed:

"Be it Resolved, That the playground and recreation executives in session at Stockton, California, December first, 1923, do hereby commend the U. S. Forest Service for its efforts to make our National Forests available to our people as recreation areas, and that we pledge our active cooperation and support of all projects tending to increase the recreational use of these Forests, and tending to safeguard and preserve them."

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Foreign Cooperation: District 5 has sent seeds of the Incense Cedar, Sugar Pine, Big Tree and Redwood to the Forester of the East Coast of Sumatra and 132 pounds of Yellow Pine seed and 10 pounds of Sugar Pine seed to the Forestry Commission of Australia. These seeds are intended to introduce American species in these countries.

On account of the poor seed crops in District 5 a great deal of difficulty was experienced in gathering the supply.

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$21,000,000 Timber Cut: The first of a series of articles by the District Forester on the timber resources of Superior California appeared December 22, 1923, in the Sacramento Bee.

In this first article Mr. Redington states that the annual cut of timber from Superior California is worth $21,000,000, of which 30 per cent comes from the National Forests.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

O & C Lands: At the recent meeting of the county judges and commissioners of Oregon, Judge Gardner of Jackson County introduced a resolution which, if approved, will request Congress to add the O & C lands within the National Forests to the Forests, the Forest Service to settle the railroad equities from its receipts. The resolution is to be voted on by the judges and commissioners by mail.

The classification of these O & C lands is quite a serious problem on the Crater. The proposed classification will allow 300 M feet B.M. of yellow pine timber per forty-acre tract, and this will allow the taking up of much of the so-called agricultural land for its timber value.

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Another Big Timber Sale Being Advertised: The Herman Creek unit on the Umpqua National Forest, which carries 375 million feet of timber, mostly Douglas fir, is now being advertised. Bids will be accepted May 5. This unit is a part of the Row River Working Circle, and the management plan provides for a cut of 40 million feet per year perpetually.

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Meat Eaters: Ranger Burge of the Chelan says: "I have noticed recently an argument in both the Forest Bulletins as to the probability of pine squirrels eating meat. While talking with an old miner and trapper who is thoroughly reliable in his statements, he said that he had seen pine squirrels rob traps of meat placed there as bait, but had never seen one kill for meat."

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Stories: From July 1 to December 31, 1923, 18 signed articles have appeared in print from officers in District 6, ten articles by District officers, and eight by Field officers.

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Battling the Bugs: The large pine beetle control project in southern Oregon and northern California is entering on the third and last season of large scale control operations. In 1922 and 1923, the private owners and the Federal Government spent $170,000 cooperatively in control work. Gratifying results have already been secured.--A.J.J.

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PENNSYLVANIA TO SUPPLY OVER 7,000,000 TREES

More than 1,200 applications have been received for a total of 7,300,000 forest trees, which will be shipped from the State nurseries next spring. This is more than twice as many as were shipped during the whole year of 1922, and almost half again as many as were distributed during 1923. The applications call for a million and a half white pine, a million and a quarter Norway spruce, a million and a quarter Scotch pine, one million larch, seven hundred thousand pitch pine, and a smaller number of the other trees that are available for distribution.

Applications continue to come in daily, and it is predicted that next spring more than 9,000,000 trees will be required to supply all the demands for forest tree planting stock.--Pennsylvania Department of Forests and Waters.

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Where Did He Go From There? An old Swiss, one Nikolaus Utley, according to ex-Supervisor Tim Hoyt of the Sitgreaves, got lost once upon a time in the mountains of Utah. After wandering for a couple of days he ran across a forest ranger. "My name is Nikolaus Utley," he said. "I have been lost three days - yesterday, to-day, and tomorrow. Where am I?"

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Service Bulletin
U. S. FOREST SERVICE
(Contents Confidential)

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FOREST PROTECTION WEEK, APRIL 21-27, INCLUSIVE
By Miller Hamilton, Washington

President Coolidge has signed the Proclamation designating April 21-27, inclusive, as Forest Protection Week. Letters will go immediately to all Governors requesting supplemental Proclamations on the Week and on Arbor Day. The lumber trade, through its various organizations, has been notified of the Week and its aid requested as usual. The Rotary, Kiwanis, and Lions Clubs have been asked to take an active part in observing the Week. The Boy Scouts, and other similar organizations, are in on it.

Many of the outdoor societies, such as the Isaak Walton League, stand ready to observe the Week. And before another two weeks roll around the Washington office, through the Forester and Associate Forester, will have solicited the aid of many other organizations. The Secretary of Agriculture is also busy. All in all, it looks as though the Service has got off to a good start, judging from the few reports thus far received from the Districts.

Keep the old ball a-rolling!

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SAILOR LIFE ON THE TOSSING TONGASS
By J. M. Wyckoff, Tongass

Traveling alone on foot, horseback, or in a "Lizzie," "Laura," or "Gwendolyn," might be a commonplace stunt performed by the rangers in Districts 1 to 7 inclusive, but traveling alone in District 8 with a salt water "steed," the only means of travel in Alaska, has a little more of the romantic about it; something you may see in the movies but never realize personally. As, for instance, the recent experience of Ranger MacKechnie.

Mac was out with his 20 H. P. steed to take care of a bunch of work in Frederick Sound, about 30 miles from his headquarters. He was storm-bound for three days, and, becoming restless and lonesome through his enforced solitude, he took the first lull in the storm as a sign that all was well and started to his station, lying off to the southeast. After getting to about the half-way point he began to hit into a storm and Ranger 4, being built on the broad and smiling type forward, began to jump and bounce along, her horizontal line of travel being about like that of a worm crossing a much traveled country road in the rainy season.

While the old "4" slowly crept towards home, the storm increased to a gale and she would bump and bounce and shake herself, and veer and swerve and get up on a big comber and see if she could go all ways at once, ahead, astern, up, down and sideways. Mac says she is the last word at shimmying. Pretty soon Mac began to be splashed from behind as well as through the pilot house windows. Looking backward he found the flywheel pan full of water. He lashed the wheel and ran below to find the trouble - and found it. The heavy seas had opened the boat up forward and the water was coming in by the bucketful. He started the pumps and to his dismay found them both clogged. Then he took a look around outside. He was three miles offshore, it was too far back to harbor, the boat was behaving her worst and the fury of the storm steadily increasing.

So Mac started to clean the pumps. He would reach into the bilge and get a gob of grease, oil, dirt, and shavings that the barber left the last time the ship was fixed, and hastily throw this overboard; run to the wheel and straighten up the boat, and then run below for another handful of what was clogging the pumps. And on his way hither and thither he had to pass through the heavy spray from the flywheel. About an hour of this sufficed to clear the bilge so that the pumps would keep the boat from gaining more water. And through all this the wonderful thing was that the engine never stopped. Mac says just for that he is going to give it all the oil it wants. Finally finding that he was getting the best of the sea, Mac perked up and slowly made his way home where he found, upon close examination, that the water was shooting into the boat through 12 holes that had let loose their calking.

Mac smiles his "winning one" when questioned about the trip and figures it is just one of those little chances a man takes in life. It is. They confront the ranger every day; not as seriously as this one, but there is always need for quick thinking, cool, deliberate action, and a knowledge of boats and the wild waves that is not in the "brain book" of the average forest ranger.

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NO TASTE FOR TRIMMINGS

By Emery E. Wilson, Jefferson

In the Service Bulletin of January 28, headed "Marks of Faithfulness" we have another feeler for attraction in our personal make-up.

I am not a raving pacifist, or anti-militarist, but these decorations do sort of get on my nerves. I have never been fully reconciled to the belief that we ought to wear a uniform, but this is now a requirement and I respectfully surrender. Now with our uniform whereby we are distinguished from the men that we meet, mingle with, and do business with day after day, here comes another attraction in the form of tape wound around our arm.

We have the public to deal with for the most part in a different way than the postman, street railway men, coast guards, and policemen have, and the more firmly we keep this in mind the better the Service will succeed. The railroad companies do not require their business solicitors or the men that mingle on the business getting side of their work to wear distinguishing marks. Neither does any other business concern that I have knowledge of.

On our ranger districts we live with the users of our forest resources as neighbors; we associate with them as friends; do business mainly on an equal degree of rank and not by force or show of authority. In other words we should make ourselves fit in to attain that likeable respect and confidence. All these decorations tend to widen just this very gap that we are trying to fill up.

I firmly believe that those modest and old-time rangers that Mr. Guthrie speaks of in his article - who are not shouting their years, who worked along with the people dressed in the style they dressed in, and talked in their language - really played the greater part in placing the Service with the people where it is to-day. To be sure they did not advertise themselves, but they did advertise the Service and are now remembered, not by tape or any other marks on a uniform, but by the service they gave.

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THE STATE OF WASHINGTON AND THE 9-FOOT ROAD

By Evan W. Kelley, Washington

Last summer the Forest Service built a road - yes, a 9-foot road and a good one, perfect grade, even profile, good inslope and just as near a 9-foot width as skill and desire to conform the work to specifications could make it. It was a mountain road, too; 10 per cent money paid the bill. Its cost was a credit to the man who built it and an accomplishment of merit to the Forest officers directing the work. By it a prosperous valley with its several towns was afforded a direct road to its county seat. The residents of the valley were pleased with the job. Local papers voiced the satisfaction of their readers. One paper editorially commended the Forest Service. Another carried an article suggesting that in the future the County Commissioners might well consider the advisability of turning over to the Forest Service county money available for road work within and adjacent to the Forest. The editor pointed out to its readers on this particular job and others in the vicinity of similar nature that the Forest Service had proved its ability to construct good roads. He mentioned, too, that the Forest Service had demonstrated in its road building activity a conception of values meriting the confidence of the public. The Washington State Highway Commission was so favorably impressed that it even turned money over to the Forest Service for the reconstruction of a stretch of existing community road on the Forest Service 9-foot specifications.

Does this display of confidence and expression of approval of Forest Service road specifications prove the contention of Mr. Wheeler that all of the public looks upon Forest Service roads as mere cow trails? The point of view of the tourist from Chicago or Kansas City, pleasure-bound in Colorado, and the farmer on the Methow Valley who connects road cost and taxes, differs materially.

With apology to Supervisor Harris of the Chelan Forest, the Supervisor who holds the honor of spending State road funds, I submit this article to Bulletin readers.

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WASHINGTON NOTES

Nursery to Grow Slash Pine Seedlings: One of the serious drawbacks to forest planting in the South is the extreme difficulty in procuring pine seedlings. No State forestry department south of Virginia is supplying the public with forest seedlings, and no private nursery, so far as our information goes, has grown pine seedlings for market.

Fruitland Nurseries, Augusta, Ga., has recently announced that it has planted a large amount of slash pine seed and expects to have a good stock of seedlings for delivery this coming fall. This information will be of interest to members of the Forest Service whose work is in the South, and who will very likely be asked concerning sources of pines for planting. The public is pretty fully awake to the possibilities of making worn-out or idle farm lands profitable by growing a crop of pines. So far as our information goes, no other nursery is planning to supply slash pine seedlings. If, however, there are other sources, the Branch of Forest Management will be very glad to be informed.--W.R.M.

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Gem From the Manuscript of a Recent Recreation Folder: "The Forest Service also protects the settler and home builder against unfair competition in the use of the range through the permit system."

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FOREST PRODUCTS LABORATORY

The "Laminex" Door Partly a Laboratory Product: "Laminex" doors, the built-up product of the Wheeler, Osgood Company, are being introduced through a far-reaching national advertising campaign. These doors are of special interest to us not only because in their construction much Douglas fir ordinarily wasted is used, but because much of the success of the process is due to our casein glue.

Doors that were soaked in water twenty-four hours and subjected to an equally long period of twenty-four-hour heat did not warp, according to the advertisement.

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Engineers Ask Congress for $45,000 on Paint Study: A request for $45,000 from Congress to enable the Laboratory to carry on a study of paint on wood is being made by the Engineering Foundation which includes civil, mining, mechanical, and electrical engineers.

At present $456,000,000 worth of paint is applied to housing property worth $45,000,000,000.

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The Mahogany Family Tree: "We desire to construct the mahogany family tree," wrote a firm. Koehler told the correspondent that he probably would not want to construct a complete family tree for the mulberry family, as one authority gives 670 species and the list is known to be incomplete.

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DISTRICT 1 - NORTHERN DISTRICT

Mortality of Signs: A recent canvass of District 1 indicates that because of defacement by the public the average annual rate of mortality in 2,660 enameled metal signs that have been posted to date is about 5½ per cent. The reports received indicate that nearly all of the damage is caused by shooting, and that to a very large degree it is localized, being of most common occurrence in the vicinity of large towns.

There is very general agreement that most of the shooting is done by boys old enough to tote guns but not yet fully responsible for their actions.

One of the most promising remedies that is suggested is educational work directed especially toward boys through the schools and the Boy Scout organizations, preferably by having boys from the Scout organizations give talks on this subject before their classes in school. Other forms of publicity and also law enforcement are suggested as possible means of reducing the damage. In some of the worst localities it may be desirable to discontinue, temporarily at least, the use of metal signs, resorting to wood instead, since it is a well known fact that a wooden sign can pack a lot of lead and still remain legible, while an enameled one is often entirely ruined by one shot.

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Seek Remedy for Stream Pollution: The Montana Sportsmen's Association, in cooperation with a number of the mining companies, has under way plans for testing out a scheme for precipitating solids and noxious chemicals from the tailings of mills. The waters in a number of important streams in the State have become so polluted from this cause that fish cannot live in them, and in some cases the use of the water for irrigation has practically ruined agricultural lands.

J. T. Travers, Superintendent of Streams in the Ohio Fish and Game Department, claims to have an effective yet inexpensive method of purifying such waters. His method has been pronounced scientifically sound and practical by the president of the State University and others, and it is hoped to have Mr. Travers visit the various plants in the State this spring for the purpose of furnishing specifications for installing the necessary equipment. The results will be watched with great interest by everyone interested in the purity of streams and in fish culture.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

P. R. Study Course is Popular: Some very constructive thought and effort are being expended in District 2 on a general discussion study course in public relations. It has been the custom for several years, in addition to the regular study courses offered, to have a general discussion course to cover some single activity with the idea of crystallizing field opinion and establishing policy. So far, more interest has been taken in the course this year than any similar one yet offered, judging at least from the volume of the comments submitted by officers in the field.

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Lumber Company Installs Aerial Tram: For some 15 years a sawmill has been operated intermittently in the heavy timber on top of Mt. Graham, Crook National Forest, a part of the time by the Mt. Graham Lumber Company and in recent years by the Gila Lumbering and Milling Company. At considerable expense the lumber was transported in a spectacular fashion by a wooden flume from the mill to the plain below, where it was resawed. Great difficulties were encountered in carrying on this operation. The flume was so steep that sticks frequently jumped out and only in some instances could be salvaged. In more recent years the flume has gone to pieces pretty badly. The present operators, the Gila Lumbering & Milling Company, with the objective of operating this plant on a much larger and more efficient scale, concluded that the most practicable way of getting the lumber off the mountain was by an aerial tram. It should be said parenthetically that the topography is such that no wagon road suitable for hauling the lumber has ever been constructed to the top of the mountain.

The aerial tram is to be about 7 miles in length. Actual work commenced on it last fall. Twenty-four towers had been completed when work was stopped by snow in December. On February 5 work commenced again at the lower end and it is hoped to have the tram ready for operation by June or July. Considerable new financing was necessary, not only for the investment in the tram but for other additions and replacements necessary to bring the annual cut up, according to plans, to about 10 million feet.

Aerial trams for the transportation of lumber have been operated successfully in some instances in the United States, but so far as known, this is the first attempt which has ever been made in District 3. The drop from the mill to the resaw plant at the foot of the tram is four or five thousand feet. One of the problems in the operation of this tram will be braking arrangements to prevent the cable from running away with the loads. It is estimated that 40 to 50 million feet of timber are available for handling over this tram.

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Colorful Customs in the Simple West: The Santa Fe is putting on an educational campaign. At Rowe, New Mexico, the meeting was held at the schoolhouse in the afternoon. About the time the motion pictures were ready to start, a wedding party led by an orchestra came down the hill and marched into the schoolhouse. There were probably a hundred people in the procession and with those already in, they made a houseful. From time to time during reel changing intermissions, the orchestra furnished music. Once during the hour the bridegroom who had apparently imbibed frequently during the day, had to be taken outside by the deputy sheriff, but all in all the meeting was an entire success, as no one appeared disturbed in the least by the bridegroom's distress,

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

When Red Tape Gets Tangled: On the La Sal Forest a ranger station dwelling and pasture has been located on State land, the Forest Service paying a rental to the State for the use of this area. We have our own rules about making payments and the State of Utah has its own legal requirements. And this is what happened:

The agreement to lease the land at a stipulated price was made informally and vouchers prepared covering payments. Of course the vouchers could not be passed until the lease was received, and it was unaccountably slow about coming. Presently inquiry uncovered the fact that the State of Utah could not forward the lease until they received payment from the Forest Service, and the Forest Service could not make payment until the lease was received. The State kindly took their scissors and snipped their red tape. The lease was then considered by the Assistant to the Solicitor who pointed out that it provided for a two-year lease and for payment in advance for each year, both provisions being contrary to the rules of the Forest Service. The two-year lease business was adjusted all right, and the State said that if the Forest Service could not pay in advance that would be all right, too, but they would have to charge 5 per cent interest on all back payments. And the Forest Service is not allowed to pay interest.

Moral: Don't lease from the State.

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A Superhonest Man: A commissary clerk on the Idaho last summer lost a Forest Service key and was charged for the loss at the cost price of 11¢. To-day the Fiscal Agent received a check for $11 to cover the loss. While he was glad to see such honesty, he is returning the $11 with the request for remittance of 11¢.

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DISTRICT 5 - CALIFORNIA DISTRICT

A Good Idea: The Klamath last year successfully used their stockmen as an auxiliary organization to their regular protection force. They circularized each permittee at the time grazing applications were submitted and secured the following information:

Who will be directly in charge of your stock?
Where will man in charge be stationed? (Give names of ranch and camps.)
Give approximate periods on ranch and range.
Can he be reached by telephone?

Can he be reached by messenger?
How many men available for fire fighting?
Fire fighting equipment available for how many men?
Saddle horses available?
Pack horses available?
Give seating capacity of available automobiles.

These questions wre to be answered as they referred to their ranch and also as to the range inside the Forest. This material was then transferred and made part of the regular fire plan.--E.I.K.

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The Forest Service in Pictures: The entire front page of the rotogravure section of the Los Angeles Sunday Times of January 27 was devoted to a "spread" of Forest Service photographs.

The page was titled: "With The Forest Service" and nine photographs were used with great effectiveness, showing lookout scenes, fire fighting, forest officers, recreation, trapping, predatory animals, and grazing.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Forest Insects: Four additional insect control projects in District 6 are under consideration. Two of these are on the Deschutes, one on the Chelan, and one on the Umpqua. The Deschutes and Chelan projects will require $20,000 of Government money in the spring of 1924, but it is very doubtful whether any part of this will be allotted now because of the shortage in the fire fighting fund. The Umpqua infestation is in lodgepole near Diamond Lake and involves recreational values on both the Forest and the Crater National Park.--A.J.J.

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Restitution: Ranger McFarland of the Cascade recently received the following most unusual letter:

> "I have a restitution to make to you, or the Forest Service for a ax I stolen or taken while I was working on the clover patch fire in 1914. I picked it up and taken it home with me; I don't know how much it is worth but I'll send you $3 so you can turn it over to the Forest Service.
> Yours truly. May Good bless you, I want to be right with God and man."

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High Stumpage Prices: The trend of stumpage prices on the Siskiyou may be seen in the recent sale of the Batan tracts of timber near Marshfield. The old growth Port Orford cedar brought $26 per M. This is believed to be a record price to date.--H.E.H.

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Supervisor Hall of the Santiam Forest has recently been elected to the position of Chairman of Camp Committee of the Boy Scouts organization, which includes four counties, namely, Linn, Marion, Polk, and Benton.

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BOOKS FOR FOREST MEN

By Charles H. Shinn, D-5

Everyone who goes to our California forests for rest and recreation owes it to himself to take a few of the best "little classics" along. Every hard-working Forest Ranger needs even more a few of the books which broaden the mind and give it glimpses of other fields of thought.

When one is in a large town which has second-hand bookstores - or even second-hand general stores with a pile of books at one end - he can often find the most delightful books in pocket-size editions at seldom more than 25¢ a copy. He can have Dr. Brown's "Rab and His Friends," Emerson's "Conduct of Life," Dana's "Two Years before the Mast," Thoreau's "Walden," Florence Converse's "Long Will"; he can get "David Copperfield," "The Virginians" (Thackaray's, I mean, not the cowboy one), "Lorna Doone," the Sherlock Holmes detective stories than which no better detective tales have yet been written, and the "Three Musketeers," by common consent the most thrilling novel of a century. There are countless others that will be a joy at every camp.

It is upon the basis of the numerous "Little Classic" collections of small pocket-size volumes that we make this urgent springtime appeal to all lovers of the outdoor world, asking all our readers to buy more books of the character described - real literature, and yet of keen interest. Do not be afraid of titles; old Jeremy Taylor's "Holy Living" is full of common sense; so are Plato's "Republic," Lamb's Essays, and what Erasmus says "In Praise of Folly."

It is the busy worker whose thoughts and labors concentrate upon the daily problems of the care and protection of our Forests who most need this general reading. It will make them better forest men for all their lives. They will get more than ever from such books as Pinchot's "Training of a Forester"; will turn with new enthusiasm and clearer wits to a study of the Journal of Forestry, and will send letters to dozens of people asking for technical pamphlets on their own particular line of work, be it silviculture, forest economics, forest protection, utilization or management. They will want to get home three or four such books as Dr. Sampson's "Range and Pasture Management," Zon and Sparhawk's two-volume "Forest Resources of the World" and Dr. Brown's "American Lumber Industry."

Thus and only thus can the forest man discover new outlooks on life and new relations with the world of thought.

Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

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WE ANTE - ONE IDEA FOR THE BIG WEEK

By E. W. Hedlun, Harney

In response to Miller Hamilton's request for ideas for Forest Protection Week, we will ante one for a raise. The idea may not be of any particular value to the Washington office, but should have some value on the Forests.

During the observance of Forest Protection Week we usually concentrate our efforts on the task of securing the proper reactions from the largest possible number of school children. On the Harney Forest we have the school children of three counties as promising material for these activities. We intend to employ the press, lectures, and pictures to as great an extent as possible. Even though we employ all these methods our force is not adequate to reach all the school children.

Supervisor Conner is therefore securing the cooperation of the County Superintendents of Schools with the following plan in mind:

1. Each County Superintendent will write a circular letter to all the teachers in the county advising them of the date and plans for observing Forest Protection Week and advising them that the time usually devoted to the study of Agriculture will be devoted to Forestry during that week.

2. A series of articles will be prepared in the Supervisor's office and furnished the County Superintendents. Each article will emphasize one idea and will be sent out separately to the teachers by the Superintendents. A tentative outline of material to be used during the week is as follows:

Monday - Importance of timber products.

Tuesday - Value of forest cover as affecting erosion and
streamflow.

Wednesday - Recreational values as affecting public health.

Thursday - Need of care with fire.

Friday - Planting.

3. These subjects, modified to apply to the various grades, will later become topics for composition in Language and Grammar work. One subject will be selected for an essay contest for the rural schools of each county.

In the above manner it is hoped that the observance of Forest Protection Week will have an educational value affecting every school child in our three counties.

Next year we hope to devise a means of raising a fund for cash prizes for winning essays.

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THE CAPITAL INVESTMENT

By E. W. Kelley, Washington

Does cost matter? Where money is scarce and every dollar made available for work must be fought for, the Forest Service has learned that cost does matter. In these fields it has learned to scan with eagle eye the amount of money going into capital investment. For this we may feel justly proud.

Has the Forest Service yet learned to fully appreciate that cost is just as important in those activities where money comes a little easier, notably in road work?

Do the advocates of wider roads hold the road dollar in the same high esteem as the "Improvement" dollar? Do these advocates take into account that it is just as important to hold down the capital investment necessary to complete a Forest transportation system as it is to keep down the capital investment of the Forest telephone system?

It is a matter of history that the Forest Service 15 years ago was confronted with the problem of constructing an immense mileage of telephone lines with only limited money to foot the annual bills. What course did the Forest Service pursue? The advice of experts to the contrary notwithstanding, it proceeded to develop its own specifications for grounded circuits - the only sort of a system it could afford to finance. The Service at that time did not realize (but now does) that the capital investment in a metallic circuit, except for special locations, for Forest Service needs is not warranted.

What would the Forest Service have done at the outset if telephone construction money had been as plentiful as road money is now? Might it not have followed the advice of its employed experts, such as Starkweather, who claimed that grounded lines more than 30 miles in length would not work? The test of time disproved the correctness of the advice. The grounded circuits do work and under the technique developed by the Forest Service our telephone system, in contradiction of perfectly good electrical theory, is a very efficient system. How true might it be that we were forced to open up this fact about grounded systems and incidentally to keep our capital investment down because we could not afford to do otherwise.

Just what exactly is the difference between advocating roads wider than are necessary for justifiable speed of travel and advocating the construction of metallic circuit telephone lines as substitutes for the simpler and cheaper grounded system? We would not make over our grounded lines into metallic circuits despite the fact that the dispatch of telephone work might be somewhat more efficient or because the summer boarder up the line at a tourist hotel may "howl" because service over the grounded line does not quite come up to his idea of standards.

Might it not be a fact, because road money is relatively plentiful, that we are likely to lose sight of how much more capital investment will be necessary to complete our Development System on width standards? Is there not a tendency to go to unjustifiable ends in investing public funds to insure imaginary safety to the summer vacationist who may kick about the dangers on narrow roads just as he does about the unsatisfactory service over our grounded telephone systems? As a side question, does conclusive proof exist to convince anyone who really thinks about it that wide roads do give safety? Do we not lose sight of the frequent wrecks along our wide State roads?

It is sometimes alleged that wider roads on side hills cost no more than narrower ones under given methods of construction. Who will attempt to prove that a metallic circuit can be built for the same investment as a single-wire line under similar conditions?

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SOME OBSERVATIONS ANENT THE WORK PLANS

By G. E. Hougham, Colorado

In his article in the Service Bulletin of February 4 on WORK PLANS, Mr. Headley quotes Mr. Preston and then gives his own observations, and asks "Is Mr. Preston right?" May I not suggest that both gentlemen are right?

I do not mean that the "Washington office is cramming Plans down the throats of the field force," but I believe that the Plan enthusiasts, among whom are numbered many of the field force, are cramming the Plans down the throats of others. That statement is too strong, however, without explanation.

It is proper that the friends of an idea be given the job of putting it over. The friends of the Plan idea have been very enthusiastic over it, but have made their Plan outlines so elaborate that it has been difficult for the majority of the field force to incorporate them in daily programs more or less fixed by habit. Some Plans have increased the immediate routine work sufficient to hide any ultimate saving of time that might actually be in store for one who faithfully followed them. The author of the Plan outline has not always remained to keep it going until the others have finally caught the complete idea. Consequently the Plans heretofore proposed have generally failed of successful and entire incorporation in programs. Some benefit has accrued from the attention given to the subject, and I think that the time and effort given to it have not been wasted.

I think it has also been true that the friends of the Plan idea have not been willing to accept anything short of the elaborate Plans they have made. It is not their insistence on planning that has been in error, but the elaborateness of their plans.

Thus we see that the elaborateness of the Plans that have been outlined has defeated their full measure of success, and the insistence for elaborateness on the part of the friends of the Plan idea has defeated the full measure of success that might accrue to much simpler and more easily installed Plans.

One practical illustration ought to make clear what is meant. I have on my desk a paper punch which automatically gauges the perforation from both edges of the paper. I adopted it in lieu of the punch formerly used which gauged the distance from only one edge. It saved picking up the punch and measuring occularly or otherwise one spacing which the old punch necessitated, and thus proved to be a very convenient saver of time and mental energy. Had I started an elaborate "Hoosier-cabinet" plan of equipment and arrangement on my desk I would probably have spent a lot of time with it, become confused and then disheartened and abandoned it. Instead I will add other little features, one by one, as the advantage of each is apparent.

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WANTED - REPORTERS FOR THE BULLETIN

By Roy Headley, Washington

Secretary Hoover, Senator Smoot, Herbert D. Brown of the Efficiency Bureau and others were to be interviewed by members of the Washington office this winter and their views reported in the Bulletin. Such men have interesting ideas about what they regard as good and bad tendencies in Government bureaus. They might even be willing to express themselves on the Forest Service, its place in American life and its accomplishments and failures.

Desirable as the project is, it had to be abandoned under the rule that we should finish the things we have already started before we take on new jobs. No one could be found who could spare the necessary time without cutting into other work already listed on his winter job sheet.

There are plenty of interesting men outside of Washington who would be glad to be interviewed on the Forest Service or bureaus and bureaucracy in general. Interviewing is an interesting art to both the interviewer and the interviewed. Can some field men find the time and inclination to report some interviews? Perhaps we regular Bulletin readers would be more interested in a report of the views of Henry Schofield, rancher and stockman, living on Big Pine Creek than we would in interviews with statesmen and big business leaders. What Henry thinks cuts a lot of ice.

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WASHINGTON NOTES

Referred to District Five's Wielders of the Golden Pen: We crave light. On page 11 of the Service Bulletin for March 3 I find that Redington is writing in the Sacramento Bee anent the timber resources of Superior California.

Tell us, please, why the word "Superior" is used in connection with the word "California."

Was it your intention to specify the upper half of the State as distinguished from the lower - in other words, to make a latitudinal qualification?

Again - is it that you wished to distinguish as between the high country and the low - a matter of altitude and its bearing on silvical possibilities?

Or can it be that the distinction implied was one neither of altitude nor of latitude, but was between San Francisco and Los Angeles?

Of course you may have dropped inadvertently into the vernacular - perhaps an eastbound wave of psychic suggestion?

If your intent was to speak of the State as a whole - a unit - then it seems apropos to point out the tautologism; to say that the single word California expresses everything. Why attempt to gild the lily or lend fragrance to the rose?

Will you kindly explain?--H.R.K.

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Kraebel Joins Park Service: Charles J. Kraebel, formerly Assistant Superintendent of Forestry in the Territory of Hawaii, is now Superintendent of the Glacier National Park.

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FOREST PRODUCTS LABORATORY

Scientific Research in the Lumber Industry: Where a saving of $376 in one day can be made through scientific research, it is easy to prove that scientific research pays. When the saving is also one that helps to extend the "waning timber supply," it fits in well with the "utilization of timber" part of our National Forestry Program.

Another angle of this particular accomplishment is further proof of the merit of the internal fan kiln developed at the Laboratory. It was with a kiln of this type that Mr. A. C. Knauss of this Laboratory obtained such favorable results during the work on southern yellow pine at Conroe, Texas. A careful check of the degrade which took place with the old type and the improved kiln showed that the former average loss of 32 per cent in No. 1 common was reduced to 9 per cent, while in B & B stock it fell from 22 to 4.2 per cent. A gain of $376 on 211,000 board feet at $25 per M is 7½ per cent on $5,000 worth of daily output - pretty good interest. Putting it another way, it means a saving of $1.85 per M.

Applied to the kiln dried pine lumber output of the Southern Pine Association, which totals only one-half of the total southern cut, and assuming that the figures are average, there would be a total saving of $3,700,000 annually if the internal fan kiln were in universal operation by all the members of the association. Actually the saving would total $4,500,000 if the estimate were made by grades as they are reported by the association.

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FOREST EXPERIMENT STATIONS

Southern Has Some Job! The territory in which the Southern Forest Experiment Station is carrying on its work includes the forested lands within the Coastal Plain and Piedmont regions of South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, and Texas, and the Ouachita Mountains of Arkansas. These physiographic regions within the nine States contain about 323,000 square miles, including the agricultural lands, cities, etc. In 1920 the lumber cut of these States was 35 per cent of the total reported for the Nation. Assuming that this territory as defined includes 60 per cent of the oak-pine region, 85 per cent of the southern pine region, and 85 per cent of the river bottom hardwoods and cypress region, its productive capacity under intensive forestry is estimated to be 6,800,000,000 cubic feet annually. This is 25 per cent of the estimated total production for the United States under the same practice.

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DISTRICT 1 - NORTHERN DISTRICT

Forest Protection Week: A program for use in the schools of Montana for observance of Forest Protection Week has been prepared by the Office of Public Relations in cooperation with the Forest School at the University. The cost of printing is to be paid by the Northern Montana and the Big Blackfoot Timber Protective Associations and by the State Forester's office. County Superintendents have been interested in the distribution of these programs, and in most cases are writing letters directing teachers to conduct exercises to properly emphasize the importance of forest protection. The protective associations and school of forestry of the University of Idaho last year got out a printed program, three thousand copies of which were distributed throughout the State, and are planning to do the same this year.

A strip cartoon is being prepared by Mr. J. B. Halm, from which a series of five slides will be made, illustrating the manner in which smokers and campers start fires. It is also planned to furnish this to newspapers to be run during the week.

Plans for observance of the week in other ways are well along, and finer results than ever are anticipated.

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Exhibits: K. D. Swan is assisting the local office of the Deerlodge Forest to install an exhibit at the automobile show in Butte. The exhibit will stress auto camping, and one of the local force will be in attendance prepared to give information on all of the various trips through the Deerlodge and near-by forests, together with information in regard to equipment, food supplies, camping permits, hunting and fishing seasons, etc.

A similar exhibit was put on at the automobile show in Spokane in January. Plans are also under way for an exhibit at the annual meeting of the Montana Livestock Association at Dillon to be held in April. Forage and poisonous plants will be featured. It is expected that Secretary Wallace will be present at this meeting.

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Island "Dude Ranch": A new resort is being opened on Wild Horse Island in Flathead Lake. The island, which rises from the depths of the lake, is a miniature mountain containing 4,000 acres. It is quite heavily forested and has many beautiful beaches, bays, and inlets. The proprietor in advertising the resort features the fact that it is surrounded by vast National Forests, and mentions also the National Parks and the Flathead Indian Reservation.

The number of resorts and "dude ranches" in Montana is increasing rapidly. These resorts when situated in or near the National Forests serve to interest people from all over the country in forestry.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Ranger Meetings in D-2: Four group ranger meetings involving thirteen Forests will be held in District 2 during March. The meetings will be conducted differently than in the past in that only four main subjects will be discussed - Work Plans, Management Plans, Land Exchange, and Economic Results of Improved Grazing Methods - one day being given to each subject. Another new feature is that instead of having all men meet in regional groups, representatives are being sent to distant meeting points. It is believed this scheme will result in more enthusiasm and a broader interchange of ideas than when attendance is limited to more or less local meetings.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Southwestern Trees for China: A box of tree seeds containing juniper, pinon, Arizona cypress and Arizona oak has been sent to Mr. W. C. Loudermilk at Nanking, China, for experimental purposes along the Yellow River region. Mr. Lowdermilk was a former member of District 3. He is at present in charge of forest research at the College of Agriculture and Forestry at Nanking, China, and is trying to find suitable tree species with which to reforest the valley of the Yellow River. This region which was once forested has been entirely denuded of timber growth. Erosion and floods have resulted and have been the cause of terrible famines in China.

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Arbor Day in Arizona: A pamphlet entitled "Arbor Day" has just been received from the Superintendent of Public Instruction for Arizona. This booklet has been distributed to all Arizona teachers with the request that it be used in appropriate exercises to commemorate the day. In transmitting the pamphlet, Mr. C. O. Case, State Superintendent, says: "The teachers of Arizona will be grateful to you for any literature you may send them pertaining to the forest reservations, etc." The attitude of the State Superintendent undoubtedly will make it easy for forest officers to cooperate with the schools in the observance of Arbor Day in Arizona. In the southern part of the State, Arbor Day was on February 8. In the five northern counties it will come on April 4.

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Former Supervisor at Forestry Meeting: Mr. Elliott Barker, ex-Supervisor of the Carson, arranged for and recently attended a forestry meeting at San Ignacio on the Santa Fe. This was one of the series of about twenty meetings in the educational campaign put on by the Santa Fe. Barker has been in the stock ranch business not far from this place since leaving the Forest Service and has become an influential conservationist leader in his community. The schoolhouse at San Ignacio was well filled by local native Mexican people who listened attentively to explanations of Forest Service ideals and objectives. There were practical discussions, illustrated by lantern slides, of fire problems and methods of fire detection and suppression suited to the vicinity by Ranger Bruhl. Five reels of motion pictures stirred a lot of enthusiasm. Mr. Barker expressed himself as being strongly impressed by the advancement made in public relations work in the last few years. He sees the Service taking long strides forward.

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Why We Have Tall Rangers: Ranger Pinson of the Santa Fe towers above six feet and weighs 219 pounds. Recently he sat at dinner in a small town on his district. Four school teachers were at the same table. Says one, whose home is in the east, "All the Forest Rangers I have seen in the southwest are great big men. Why does the Forest Service have that kind?" The information came immediately from another teacher, "Why, so they can see above the trees."

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Hardwood Lumber Industry: Fifty-seven years ago a sack of walnuts was brought across the plains and were planted at Riverdale, Utah, in a long line for a windbreak. The trees were planted close together, and where none of them died out they stood so thick that vigorous growth was impossible. Last week this line of trees was cut down and the owner finds himself with 4,000 feet of first-class black walnut logs. He has made arrangements to have them hauled 15 miles to the nearest sawmill at Huntsville where they will be cut up into lumber which has been contracted for by a local Ogden lumberyard. Thus does Utah black walnut enter the market.

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Work Plans - How Do They Taste? Such is the caption of an article by Mr. Headley in the "Service Bulletin" of February 4. It seems that Mr. Preston of the Washington office contends that they taste pretty bitter to the field and that the Washington office is cramming them down our throats irrespective of our feelings in the matter. Allotment conferences have just been completed in this District and work plans came in for a big lot of discussion, and we can say that as far as District 4 is concerned, a good, simple work plan tastes mighty sweet. Probably not fewer than 95% of the Rangers and Supervisors are thoroughly converted to the use of work plans, and now they have given them a good trial they wouldn't be without them. Of course, while there is a general agreement that work plans are pretty sweet tasting, some folks like the peppermint flavor better than the sassafras, and still others believe that vanilla is the supreme stuff. Accordingly, there is a good deal of verbal fireworks about just what kind of a work plan is most effective. There is a general and well founded dislike of elaborate plans, but that's as far as it goes. Furthermore, we would like to tell the Washington office that six years ago, before any "cramming" from Washington took place, this District was formulating simple work plans on its own hook.

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DISTRICT 5 - CALIFORNIA DISTRICT

Trail Named After Chief Forester: As an outward expression of the University of California's esteem the three new trails to be built on the north slope of Strawberry Canyon by the students on their leap year labor day, February 29, will be named after William B. Greeley, '01, Stephen Mather, '87 and Franklin K. Lane, '86. Above the upper trail 1100 Sequoias will be planted as a tribute to John A. Britton, formerly a member of the Board of Regents.

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The Rank of Lumbering Among California Industries: We are frequently asked what place lumbering holds among other great industries in California.

An answer to this question has been derived from a special bulletin issued some time ago by the Bankers' Economic Service of New York City. On the basis of 1920 census figures lumbering ranks sixth among the chief industries in value of products. Foodstuff, petroleum refining, public service and supply, shipbuilding and metal products lead lumbering in the order given. The value of lumber and timber products as given in this bulletin was $99,299,000.

The lumbering industry ranks fourth in number of wage earners. Twenty-five thousand employees, or ten per cent of the wage earners of the State, are engaged in this industry.--C.E.D.

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State Receives Gift of Redwood Grove: A gift to the State of 289 acres of virgin redwoods generously made by the Pacific Lumber Company was formally accepted on February 4 by the California State Board of Forestry. This tract, known as the South Dyerville Flat, is on the Redwood Highway in Humboldt County and adjoins the new State Redwood Park. In making the gift the Pacific Lumber Company asked that the forest be designated a memorial to Simon J. Murphy, one of the founders of the company. Over 6,400 acres of virgin coast redwoods are now included in various parks in the State.

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A Big Timber Deal: The Red River Lumber Company has agreed to sell to the McCloud Lumber Company all the pine timber on 8,798 acres of land in Siskiyou and Shasta counties for a price that is reliably stated to be in excess of $2,000,000.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Let George Do It: For a number of years the Chelan has required wood cutters of S-22 sales to burn the brush as it was cut when cutting was done in the winter. Of late we have required that the brush be burned on some commercial wood sales with very good results. When the tree is felled a fire is started near the top and this will consume the small limbs about as fast as one man can trim and pile them on.

The advantages of this method are obvious. The least possible damage is done by burning, it requires no supervision, cleans the area with one operation and is more agreeable to the operator when cutting and brush piling are contracted.

It is true there are many small tips and twigs which snap off when the tree is felled and which are not burned. These do not create an appreciable fire menace because the snow mashes them down on the ground. Furthermore, it is unnecessary to kindle fires on the area and their presence would only affect an accidental fire.

If this method can be worked economically on large sales it would be worthy of consideration to the extent of lowering stumpage values to an amount equal to brush disposal and damage costs.--G.E.M.

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Portland Outdoor Show: The offices of Operation, Forest Management, Lands, Grazing, and Public Relations put on in the auditorium February 18-21, what was said by many visitors to have been the best exhibit at the Outdoor Show. The exhibit represented a cross-section of a National Forest, showing logging operation, summer camping area, roads, open system of herding and fire lookout. There were some 35,000 visitors to the show. Three Forest Service movies were seen by 7800 people.

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The Olympic can very well boast of serving as an information bureau. We are even called upon for information regarding divorce and remarriage. Just listen to this:

"In the state of Oregon a person must wait 6 months after a divorce is granted to marry again. Can they, as soon as the divorce is granted in Oregon, come over into the State of Washington and be married? Please tell me the law. Resp'y."

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Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

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FOREST PROTECTION WEEK ISSUE

A RANGER SPEAKS ON FOREST PROTECTION WEEK

By E. L. Perry, Santa Fe

Editor's Note:--Ranger Perry wrote the following article for the recent Santa Fe Ranger meeting. He had no intention of having it published, but his article seemed such an excellent presentation of the wide-awake Forest officer's viewpoint that it is given here in full.

Of the various fire risks that menace the forests of this country, there are computed to be about one hundred and six million and one. The one is lightning. The others are listed in the 1920 census report.

We are not interested in the lightning risk during Forest Protection Week. We cannot control it anyway, unless, perhaps, we are prepared to equip our several trees with lightning rods. But the human risk is controllable, and I believe that the resourcefulness and energy which we throw into the problem is going to largely determine the public's judgment of us and our work in the future. It seems a little paradoxical, I know, to say that the public will base its regard for us on the extent to which we prevent it from setting the woods on fire, but this is none the less true. We are just now getting it educated to the point where it loudly demands to know "What's the matter with the Forest Service" when a disastrous fire occurs, but still complains bitterly when it is haled into court for leaving a camp fire burning.

In other words, it is coming to realize the seriousness of the consequences of fire without realizing, or at least admitting, that those consequences can be averted only by its own care. Not until the public becomes thoroughly sold to the principle that fire destroys property as readily and surely in the forest as it does on the farm or in the city will we ever see any marked decrease of man-caused fires.

Since every human being capable of moving from place to place and scratching a match is a possible risk, it follows that there is no person to whom it is unimportant to preach our gospel. The only question that arises is the manner in which the preaching shall be done, taking into consideration the characteristics of the preacher and the preach-ee.

We fall woefully short of the possible in our publicity work. Perhaps we have fallen into a rut. We seem to have come to idealize certain mediums of publicity without regard for the results obtained. We show too little originality; do too little experimenting. It is safe to say that every Forest Officer has passed up numberless opportunities to advance the cause because none of the popular methods happened to fit the case. There is an almost unlimited field here for the exercise of originality and ingenuity. If we put half the pep and resourcefulness into prevention that we do into suppression we will soon have far fewer fires to suppress. The warning and educational poster, the public speech - if it's a good speech - the news story, are all good publicity, but they do not sum up the possibilities. It is the novel, the unusual stunt that gets the public eye and ear. For instance, if the first of the airplane sky-writers had traced out "Prevent Forest Fires, It Pays," that slogan would have reached and had a telling effect on every man and woman who reads the papers or listens to the neighbors' talk.

The most effective means of spreading the gospel, within the limits imposed by the number of persons who can be reached, and one to which our wide flung organization with its multitudinous contacts peculiarly lends itself, is the nose-to-nose personal conversation. A man may listen with but one ear to a set speech, but a conversation with the District Ranger while sitting, say, on the counter of the local store, is pretty apt to sink in and remain. He is obligated by courtesy and the necessity for holding up his end of the conversation, if nothing else, to pay attention. Then, too, you have an opportunity to fit your method of putting the message across to the individual and he has an opportunity to ask questions and thus clear up any clouded points in his mind. It is said that a prophet is not without honor save in his own country. But the same is not true of the Forest Ranger. Believe me, he draws a lot of water with the public, both local and transient. Most people are somewhat flattered at being engaged in conversation by him, and will consequently believe and remember what he says.

We all of us do far too little of this nose-to-nose missionary work. It is not that we are not interested in the subject ourselves, but that we are ourselves so thoroughly sold to the principle that it is difficult for us to realize that the chance acquaintance is not also thoroughly sold. We must realize, however, that the public is not sold. Not by any means. There are relatively few people who will build a fire on the floor of a public building and go away and leave it. But there are millions who do that very thing to a public forest. No, the chances that you will waste your time in scattering seed on ground that is already sufficiently sown is only one in several hundred thousand.

Moreover, it is a form of publicity that is naturally and easily put over by anyone. It requires no special skill or training save common sense, tact, and a care not to leave the impression that the conversation was only a means to an end. Most any conversation can easily be led around so as to include a lick or two for the cause without the prospect becoming aware that you are attempting to propagandize him. If you have an opportunity to do nothing more than agree with him that there is less snow in the mountains than usual, and add that this will increase the fire danger next summer, he is likely to remember and take that statement into consideration when he builds his camp fires.

Forest Protection Week is not a convenient seven days allotted out of the year in which to do our yearly quota of publicity work. It is merely a week in which the usual publicity work is given an added impetus by concerted and concentrated effort. It is a time to observe the effects of the old publicity tricks, to develop new strategy and experiment with new plans. I used to subscribe to the theory that a 15-minute talk at each of three or four schools, with maybe a woods demonstration trip thrown in, constituted a Forest Protection Week. But I don't any more. I may have accomplished something, but I know it was not very much. I have not the knack of talking to children effectively.

Last year I pursued a new plan. I wrote down exactly what I wanted the children to understand, appended carefully considered questions and answers, and then had an interview with the teachers. I found every one of them interested and entirely willing to put the thing over. Only time will tell how much good was accomplished, of course, but the teachers reported most gratifying results.

This year I am trying a new stunt, by which I hope to kill two birds with one stone. At five of the schools near my district I expect to have exercises conducted by persons not connected with either the school or the Forest Service. They are all celebrities in their way in their communities, and carry considerable influence. At the Cuba community school, which has some 110 pupils, the Senior Priest will hold forth. Father Fangman is a fine old man and has been on the job in Cuba for 18 years. At one of the other schools the junior padre will officiate. The justices of the peace in two precincts will address the schools in their respective communities. One will be turned over to a Protestant minister, one will be left to its teacher, and I will do my worst at the remaining two, that being mandatory in the plan. I am also trying to get the local stockmen's association to postpone their regular quarterly.

This lining up of the sky pilots and judges has value in a number of different ways. They are forceful public speakers, their audiences are almost entirely Spanish, and they speak Spanish fluently; they have influence in the community; and the fact that they are speaking as free agents and not as part of their job goes a long way toward convincing the audience of the intrinsic worth of the cause. Also, it must be admitted that the fact that two J. P's will have publicly committed themselves to the principle of fire protection will not influence anyone to start a fire and take a chance on getting by with the court.

I am a great believer in the strict prosecution of fire cases. I believe that if we had stopped sparing the rod and consequently spoiling the child a good many years ago, we should now be much farther along the road to prevention. It may be a sad commentary on civilization, but it is a fact none the less that most of us are held in bounds in one direction or the other only by the fear of punishment. To a host of people the moral aspects of negligently burning up thousands of dollars worth of public timber appeals not at all. But they immediately mend their ways if they are reasonably sure that any act of carelessness will result in a criminal trial. Virtue for virtue's sake is a fine ideal and the bed rock of every religion. Nevertheless every religion provides the prospect of a specific Hell to keep its disciples treading the straight and narrow path. We once thought that it was the part of policy to let the unintentional firebug go his way in peace rather than prosecute him and make an enemy. But that day is gone forever. We may have made some enemies, but those enemies and thousands of their fellows have come to have a very wholesome respect for us.

Two years ago I had eight lightning fires and five of the man-caused variety on the Cuba District. Out of the five fires, we got three convictions. Last year I had 9 lightning fires and no man-caused fires. Did the convictions have anything to do with it? Well, I don't know. But I believe with Kipling that if you strike a pony across the nose it may not increase his regard for you, but he will certainly thereafter take an abiding interest in your movements.

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SUGGESTIONS FOR FOREST PROTECTION WEEK ACTIVITIES

By Geo. E. Griffith, Rainier

The big word in a successful observance of Forest Protection Week is "Cooperation." Get live committees from the Ad Club, the Commercial Club, Outing Clubs, Y.M.C.A., or others to handle the details of arrangements. Get civic organizations to contribute the necessary printing, etc., if sufficient Forest Service material is not available. Get committees to handle school and high school activities. Organize a corps of able speakers. "Sell" the idea wholeheartedly to the local editors. Then, with your committees under way, your job will be to "keep up the steam," - to furnish them with ideas, suggestions and material, and act as general campaign manager. The following outline and suggestions are based upon ideas actually worked out on the Rainier or near-by Forests. Taken either in part, in full, or with amplifications, they will furnish a good plan of campaign for the Forest PR officer, or the ranger:

I. Talks:

1. By members of Supervisor's office, or rangers.
2. By outsiders.
3. Preparation of talk outline and reference material for speakers.
4. Preliminary meetings with outside speakers - coaching.
5. Preliminary meetings with school principals, etc., outlining plans for observance of Week.

II. Press:

1. Feature articles prepared in popular style by Forest officers.
2. Texts of proclamations: President's, Governor's, Mayor's.
3. Editorials: Facts and suggestions furnished by Forest officers.
4. Reports of forest protection speeches given: Text or abstracts furnished to reporters.
5. News stories on proposed activities of F. P. Week.
6. Fillers.
7. Cartoons.
8. Miscellaneous publications: Chamber of Commerce bulletins, high school weeklies.

III. Schools:

1. Assemblies during F. P. Week.
2. Special class work on forest protection material.
3. Mock trials.
4. Cooperation from Supervisor of Home Gardening, Agricultural Economics, or similar allied subject.
5. High school press.
6. Use of Forest Aide pins, 6-rule Pledge Cards, etc.

IV. Pulpit:

1. Circular letter to ministers.
2. Address (preliminary) to ministerial association.
3. Outline of talk and reference material for ministers.
4. Speakers for church meetings.

V. Displays:

1. Special window displays, connecting F. P. idea with merchandise.
2. Forest protection slogans in advertisements.
3. Library: book lists and display.
4. Hotel lobbies.
5. Forest protection posters in police court, sheriff's office, etc.

VI. Miscellaneous

1. Proclamations: President's, Governor's, Mayor's.
2. Radio broadcasting.
3. Boy and girl scouts, etc.
4. Clubs: civic, women's, outing, and others.
5. Law officers.
6. Motion picture theaters.
7. Airplane.
8. Parades.

Editor's Note:--Deputy Supervisor Griffith accompanied the foregoing outline with a brief discussion of the important points and in this form the entire article was distributed to D-6. Limited space, however, prevents printing the discussion in this Bulletin.

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COMFORT FOR THE SINGLE HANDED TALKER

By Roy Headley, Washington

Most Forest officers have had to become public speakers in order to work effectively in building up anti-fire sentiment and in conveying information on numerous aspects of National Forest work. But this isn't the only kind of speaking that counts. This point is brought out in District Two's correspondence course on Public Relations, in two paragraphs quoted below, that are worth reading by everyone.

"In a book on 'Talking Business' I find this illustration: In almost every community there is a local orator who is always called upon when there is speech making to be done - Fourth of July, Decoration Day, etc. No one pays much attention to what he says but everyone believes him to be a good speaker. Also, there is always another man who is never thought of as a good speaker but who is nevertheless always called upon when there is an idea to be put across. He knows whom to see, what committees to interview, what arguments to use, what appeals to make; he talks to men, the right men at the right time; talks effectively and he puts it over.

"This story is used to illustrate what everyone already knows, that by far the most effective form of speaking - that which counts for most in publicity, public relations or business - is the talk of one man to another or to small groups in conferences, committees, advisory boards, and the like. Yet how many men do you know who have carefully and systematically studied the art and the science of talking to one man? On the other hand, can you not think of some one who has made such study and who has derived from it large returns? The returns both to one's self and to one's business from such study is such that it is hard to understand why classes in 'public speaking' flourish while the other is neglected entirely.

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THE SERVANT FIRE

By W. E. TAngren, Fishlake

When camping in the forest hills,
"Play Safe with Fire," shall be my guide
Lest by some careless act of mine
A fire should spread through forests wide.

I'll build my camp fire in a place
That's free from needles, cones, and leaves;
Away from twigs and fallen logs,
All clear of brush and living trees.

I'll guard this fire while it burns,
And never leave it from my sight
Lest while I'm gone some passing wind
Should fan its flames to savage flight.

The gentle fire that cooks my food
And warms me 'gainst the mountain breeze
Might soon become a demon wild
Devouring logs and burning trees.

If lightly fed and well confined
The fire will be a friend indeed,
So I must keep it in control
To have it serve my want and need.

And when this servant's work is done,
Upon the embers then I'll spread
Some water or some moistened earth
'Till every lingering spark is dead.

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THE POT IS A-BOILING IN WASHINGTON
By Miller Hamilton, Washington

Forest Protection Week plans are rapidly being consummated by the folks in the Atlantic Building. The program to be used in schools, Boy Scout meetings, and other similar assemblies has been received from the printing office and the distribution begun. Several talks with lantern slides have been booked for April here in Washington. The Forester will appear before the Kiwanis Club, and Assistant Forester Barnes will do the honors before other representative organizations. Other members of the staff are also booked, one lecture to be given to those members of Congress who, with their families, live at the Congress Hall Hotel.

Mr. Will Hays, "Czar" of the movies, in a letter to Secretary Wallace has signified his intention of requesting the news reel folks to shoot some good stuff in Washington and perhaps in other cities. One special stunt that holds much promise is the program arranged with the Washington Boy Scouts. According to the plans, President Coolidge will on April 21 review the entire Boy Scout personnel as the scouts march to the Ellipse south of the White House. The American Forestry Association has given prizes to be awarded to the troop having the best fire slogan, best banner, and best effigy of the careless camper, the careless smoker, and the like. These effigies are to be burned by the troops as a hint of what ought to happen to those human beings who burn up the forests. This Boy Scout stunt is arranged so that the news reels can take all the shots they want.

James E. West, Chief Executive of the Boy Scouts, has also pledged his aid and the next few issues of the Boy Scout magazines are expected to contain articles dealing with F. P. W. and the things all troops can do. This also holds good with the Girl Reserves of the Y. W. C. A.

Letters are being sent to the national presidents of about 25 women's clubs. These we hope will be productive of some good local publicity in the press. A special letter written by the national president of the Parent-Teacher Association to all State presidents has also been sent out.

The National Board of Fire Underwriters will again devote the April issue of its magazine to F. P. W. Many requests for material and photos from other journals and newspapers have been fulfilled. State Foresters in the East and North, with whom Washington has a direct contact, have responded enthusiastically to the letters sent to them. They are to make an intensive drive on the press and schools. It is too early yet to get a line on the response of the Secretary's letter to all Governors.

Mr. Sherman, the Associate Forester, says: "The Service is to be genuinely congratulated on the efforts thus far made to observe Forest Protection Week. Keep it up!"

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Service Bulletin
U. S. FOREST SERVICE
(Contents Confidential)

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THE COURTS ARE BACK OF US

By Will C. Barnes, Washington

Whenever the Forest Service goes into court with a properly prepared trespass case we generally come out winner. Looking back over a good many years of handling trespass cases I can recall but few instances where we have lost our case. Invariably the record shows that such cases were either poorly prepared, poorly presented, or else had no good foundation right from the start.

Recently several cases were brought up for trial in one of the Federal courts for the State of New Mexico before Judge Colin Neblett, himself an old-timer in the State, formerly interested in the stock business. The defendant was charged with grazing stock on the Datil National Forest without permit. The court decided the suit in favor of the United States, allowing the defendant six weeks within which to remove his stock from the Forest and ordering that he pay damages at the rate of $1 a head a year for the previous 9 months, the regular grazing fee.

In handling the case the court permitted a wide range of evidence. The defendant showed that he had made strong efforts to secure a grazing permit, which had been refused him by Forest officers on perfectly legitimate grounds. Evidence was introduced to prove that the range conditions in the Forest were such as justified the issuance of permits. The court held, however, that it had no power to direct the Forest Service to issue permits; and further that the Forest Service had come to the right place, a court of equity, to secure the removal from the Forest of unpermitted stock. The court further informed the defendant that it was not the duty of the Forest Service to round up his cattle and drive them from the Forest; that was a job the defendant himself must undertake.

I do not recall before ever having noted a decision in which a United States judge admitted that it was not within his power to direct the Secretary of Agriculture or the Forester to issue a permit in cases where properly authorized Forest officers had refused to issue them. We, of course, have always held that it was a matter beyond the jurisdiction of the courts, and it is certainly satisfactory to have that opinion made a matter of record in the United States District Court.

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BURRO SYSTEM OF TRAIL REPAIRS

By Edwin F. Smith, Eldorado

The burro as a means of transportation for trail repairing crews on the Eldorado was first used in 1918, according to available records. Former Supervisor Kotok, at that time, sent out a crew with burros as an experiment. The conditions were different in several respects from the present system, however. The crew was engaged in construction work rather than straight maintenance and the burros were rented, not owned by the Service. During the years 1918, 1919 and 1920, the system was in an experimental stage.

In 1920, the accomplishment of a two-man crew with four burros was closely observed. The cost of this crew was compared on a mileage basis with the cost of other crews of various sizes, with different methods of transportation, working in country of similar topography and soil. As a result of the studies, it was decided that a crew of two men with three burros gave the best results for the money expended.

On the basis of past performance, the crews sent into the field in 1922 consisted of two men and three burros. On reviewing that season's work, it was found that three burros were not sufficient to take care of the transportation without lost time in making extra trips. In 1923, the crew was increased to two men with four burros. Sufficient stock to handle the program was acquired by the Service by purchase.

Complete pack outfits to equip the stock were bought out of official funds and study given to the different types. The same equipment was used on the same animal all of the time.

In the winter the burros, along with the Rangers' stock, are pastured in a field rented for that purpose.

In the fall, it is the aim to gather all the stock along our route of travel so that the drive to the pasture can be made with the least amount of back tracking and overhead possible. The cost of wintering the burros is about $1 per head per month.

A good mountain man from the surrounding region is hired for the job. He is given a copy of the Trail Manual to study and then given minor jobs along this line until he understands the Forest Service procedure and requirements. He is allowed to choose his own laborers, so as to avoid any misunderstandings or quarrels. This first man is considered the "boss" of the crew and is responsible for the completion of the work. He makes arrangements with some local store for credit on supplies he may need during the working season.

The crew packs in a month's supply of grub at the beginning of the season. With the time reports for the month, the boss sends in his order for the succeeding month's supplies. The Forest Service secures these and sends them to a point on the road nearest his camp, from which point they are packed into camp. The cost of transportation of the supplies to this point is borne by the Service only when deliveries are made not oftener than once a month.

Time is only allowed for days worked, which results in a crew working every day, except about two days a month. The crew moves camp when their work is more than a mile and a half away. Each year the Ranger and Supervisor outline a trail schedule, prepare a map for each crew and give it to the boss. The sequence of the work laid out in the plan provides for working the trails at lower elevations first and advancing to higher elevations as the snow recedes. At the height of the fire season, provisions are made in the plan for the crew to be more or less in communication with the outside and working in a region of fire hazard. The work of the crew is supervised by the District Ranger during his regular field trips and also by the Supervisor at more or less regular intervals.

In determining the route to be followed, as laid down in the plan, it is provided that tools be sharpened at ranger stations, cattle camps, etc., where forges and grindstones are available for the heavier sharpening. Replacements of broken tools, powder, caps and fuses are sent in with the regular monthly supplies, if needed. Property is charged to the boss of the crew when he leaves in the spring and checked in when it is brought back in the fall.

The cost of repair work varies considerably with the character of the topography and soil. During the season of 1923, with three two-men crews, 206½ miles of trail were repaired. The total cost was $3,039.25, or an average of $14.71 per mile.

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SHEEP DAMAGE IN DISTRICT THREE

By R. E. Marsh, D-3

Specimens of western yellow pine seedling damage were submitted to this office last fall by a field officer with an inquiry as to the cause. Neither this officer nor the District office believed it to be sheep damage. This is thought to be the incident, however, which Chapline uses for his text in an article in the Service Bulletin of January 28, the general import of which is that sheep are repeatedly being charged unjustly with damage to western yellow pine, and that there is a tendency toward unsettling this essential industry through the unwarranted zeal of misguided forest officers. This is the import of the article notwithstanding the conscientious inclusion near its close of a statement that if livestock is doing damage to reproduction, readjustments should be made.

The following remarks apply to District 3. That sheep do severe damage to western yellow pine reproduction has long been recognized by silviculturists who have taken the trouble to observe the situation closely. From the time Leiburg in 1902 called this situation forcibly to attention, evidence has continued to accumulate through the work of the Fort Valley Experiment Station, grazing studies, and through administrative channels that sheep grazing was entirely preventing or seriously handicapping the reestablishment of the forest on extensive cut-over areas.

This culminated in 1921 in a definite policy for meeting the situation. The gist of this was sheep exclusion pending restocking on yellow pine areas cut over or to be cut within three years (now modified to from five to ten years), except where there was already satisfactory restocking beyond danger of sheep.

Neither Forest Management nor Grazing consider that sheep are the only class of stock guilty of serious damage. The studies indicate, however, that the damage done by sheep is very much greater than that done by cattle. Since sheep are handled in bands, it is practicable to confine them to definite allotments or areas, while cattle cannot be so handled without an intensive system of fences. It is therefore reasonable that the above policy be followed even while recognizing that there is still much to be desired in connection with cattle grazing.

Chapline appears to argue for a less drastic attitude toward sheep grazing because a considerable percentage of the damage is often caused by such natural factors as tip moth, porcupines, etc. The control of these natural factors is still an unsolved problem. D-3 takes the position that the presence of these uncontrollable contributory factors is an argument for eliminating sheep damage which is controllable.

Limitations of men and money preclude a scientific investigation and careful weighing of all damage factors on every individual sale area. By and large, sheep grazing as now practiced is inimical to establishment of western yellow pine reproduction, and if we are to continue in the timber business we must have a policy that is workable under existing limitations. This policy will sometimes result in the exclusion of sheep from areas where it is not silviculturally necessary. Some of our grazing friends insist that it is improper sheep grazing that is objectionable - not sheep grazing per se. Be that as it may, it is the grazing system which has been permitted by the Forest Service since its inauguration, and it is a question whether such degree of scientific range management as is necessary to overcome this damage is practicable under present administrative handicaps. If, however, our standards can be raised to this point, then the present sheep exclusion policy may be modified accordingly.

Although sheep have been excluded from 300,000 acres of land already cut over or soon to be, and although the rate of stocking of all D-3 ranges has been greatly reduced, there are still thousands of acres, both cut-over and virgin, which, under present grazing conditions, are falling far short of realizing their productive capacity. Should not Chapline's concern for the stock industry be extended to our marked failure to approach this productive capacity as measured in terms of timber growth and yield?

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HIGH LIGHSS ON FOREST PROTECTION WEEK

Something More About the Cigarette: A recent report submitted by the State Forester of Minnesota throws some more evidence upon the possibility of starting forest fires from discarded cigarettes. An experiment conducted by one of the State men during the 1923 season consisted in driving along a peat road during a hot afternoon and throwing 20 lighted cigarettes, 5 pipefuls of burning tobacco, and 60 lighted matches on the peat road. Every one of the cigarettes thrown out started fires. The tobacco from the pipe failed to ignite the peat as was the case also with the discarded matches. It was said none of the matches reached the ground in flame.--C.R.T.

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Good Cooperation Here: Speaking of getting others to take on a part of the Forest Protection Week program: The chambers of commerce at Coeur d'Alene and St. Mary's now have each a forestry committee. This is something that could be worked out in connection with many commercial and civic clubs, and offers one of the best places to direct some of the Forest Protection Week effort this year. The President of the Agricultural College at Bozeman delivered an address on forest protection. The Rotary Club at Livingston prepared special place cards. Attached to each was a pledge which the members signed. Three joint speaking tours were made from Missoula by three different sets of men representing the university, the protective associations, and the Forest Service, each spending a good part of the week visiting outlying schools.--D-1.

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What's In a Name? "A rose by any other name would smell as sweet," but if one person calls it a rose, another a carnation, and another dog fennel, there is certain to be a misunderstanding. The same liberties in the use of terms im general would almost amount to a confusion of tongues.

Among the terms applied to Forest Protection Week are "Fire Protection Week," "Fire Prevention Week," "Forest Fire Week," etc. If we in the Service use all sorts of names in speaking and writing of this big annual affair of ours, how can we expect to avoid having it confused in the minds of the public with other fire events and activities?--D-1.

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D-3 Will Cooperate with Insurance Bureau: The District Forester has just been advised by Mr. W. B. Wagner, New Mexico State Deputy for Insurance, that the National Board of Fire Underwriters is sending the motion picture "Fire" for use in conjunction with the Forest Service campaign against forest fires. This is in keeping with the splendid spirit of cooperation that has existed for several years between the Southwestern District of the Forest Service and the State Department of Insurance. The film will be shown along with the Forestry "movies" on the various forests. Recently Mr. Wagner distributed a quantity of our "Outlaw" bookmarks among the auto owners of the State.

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Children Pledged: Ranger Wiesendanger of the Mount Hood Forest has completed his program of school talks in Portland. More than 2,000 school children pledged their cooperation in leaving clean camps and putting out camp fires after picnicking in the National Forests. "Red Enemy" was shown after Wiesendanger's talk to the kids.--D-6.

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Southern California Fire Conference: On March 3, representatives of various organizations in southern California that are particularly interested in fire protection met at the Chamber of Commerce in Los Angeles with the State Forester and Messrs. Charlton and Deering to discuss the best means to handle what the southern interests considered was an unusually dangerous fire condition, due to the lack of precipitation this winter. Some progressive resolutions were adopted and those relating to the clearing of State highway rights of way in mountainous areas, the securing of authority for making militia and soldiers of the regular army available for emergency call if our organization found itself unable to cope with the fire situation, securing a State law requiring receptacles in moving vehicles for matches and burning tobacco and making it a misdemeanor to throw burning material out of moving vehicles, are particularly interesting.

It is expected that something very definite will result from this meeting, and active steps are being taken by State Forester Pratt and the Forest Service to carry out the suggestions brought forward at the meeting.

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Junior Sportsmen: A forest protection meeting was held recently by the newly organized junior sportsmen's association of Enumclaw, near the Rainier National Forest. The Junior Sportsmen's Association consists of boys of the high and upper grade schools of Enumclaw.--D-6.

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WASHINGTON NOTES

"O" Puts Still More Fish in Efficiency: Over in the seething Branch of Operation they are making rush tags from the wrappers on Prince Albert tobacco cans. Hereafter, no other tobacco may be smoked by members of that Branch without written consent from the Forester.

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The Influence of Location and Distance on Stumpage Prices: In response to a request for prices of standing timber, an old man from Kentucky reports that: "Lumber is worth $3 per thousand where I am sitting and I am sitting three miles from nowhere. I also threshed wheat for 13 years or 13 seasons, and I also went to Kansas in 1921 to see my daughter-in-law. I saw 2,000 feet per day, I and a boy."--C.W.B.

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FOREST PRODUCTS LABORATORY

Timber Production and Protection Researchers Assembled at the Laboratory: From the four quarters of the United States, Forest Service timber production and protection men assembled at the Laboratory for a two-weeks' conference during March.

"Conference" does not seem the right word, really, sort of easy going. But this group led far from a life of leisure. At it early in the morning until almost six in the evening and then more strenuous work at committee meetings until a late hour. Fortunately, the weather conditions were especially crisp and stimulating.

Col. Greeley was somewhat busy also. He made five speeches in four days to Madison audiences without repeating himself or putting a single auditor to sleep. In addition, he sat through four days of the fire and smoke of the battle of graphs and never batted an eye over the ponderous discussions of the highbrow scientists from the West. It seems that even our chiefs work for their money.

Director Winslow, the man who put the "prod" in products, made the most of his opportunity to show the visitors that efficient utilization of timber is a most important part of forestry. Making one tree do the work of three, even the silviculturists must admit, is forest conservation.

The Forest Products Club banquet, one of three dinner parties on successive nights which the visitors attended, afforded a splendid opportunity for the visitors and Laboratory men to get acquainted.

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DISTRICT 1 - NORTHERN DISTRICT

Lest We Forget: The names of E. B. Crittenden and Marcus Cook are commemorated in the names of two peaks on the St. Joe Forest. Crittenden Peak is in unsurveyed Section 15, T. 46 N., R. 7 E., on the Idaho-Montana line. Marcus Cook Mountain is the name given to a peak in the Cedar Mountain Ridge in Section 9, T. 46 N., R. 5 E.--C.K.McH.

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Special Use Business: Recent compilation of figures for special use business in D-1 discloses a margin of receipts over expenditures for the fiscal year 1923 of $3,787 as against $411 for 1922. This greater figure, of what might be called profit, is not the result of charging the public more, since total receipts for the fiscal year 1923 are slightly lower than those for fiscal year 1922. It is in the costs of doing the work that a saving has been made. A somewhat greater amount of special use business in the fiscal year 1923 was handled at a figure of $8,551 as against the cost in fiscal year 1922 of $12,101. The indexes for the present year are that special use receipts will measurably increase, due to new business, which will likely also cause a commensurate increase in the cost.--M.H.W.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Name of Battlement Changed to Grand Mesa: President Coolidge signed an executive order March 11 changing the name "Battlement National Forest" to "Grand Mesa National Forest." The name "Battlement" never did have much significance when applied to this Forest, but "Grand Mesa" is a geographic feature so prominent as to attract attention from that whole portion of the western slope of Colorado. The larger part of the Forest is in this mesa. The "Battlement Mesa Forest Reserve" was created by proclamation of President Harrison in 1892, and was changed by proclamation of President Roosevelt to "Battlement National Forest" in 1908. All the commercial bodies in that portion of the western slope and the Forest officers agreed that the change from "Battlement" to "Grand Mesa" is very desirable.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Turkey Range Wanted: About every six months some one conceives the idea that the real opportunity for acquiring a fortune is on a National Forest range for domestic turkeys. A request for information has just been received in the District office. Says the letter in part, "I expect to go into the turkey raising business, and I know that New Mexico would be an ideal place for that, inasmuch as it is high and dry. Turkeys thrive best where there is plenty of natural food, and this, of course, would be available in the forest reserves. What I would like to get, if possible, is some land that has water on it, and where there would be a few valleys in which I could raise some alfalfa - enough for the stock I would have to keep. I would not expect to do any farming."

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Just Like Movie Stars: Director Pearson of the Fort Valley Experiment Station has conducted some diameter growth studies with MacDougal dendrographs. Graphs from these machines show that there is a strong swell and shrink to a tree which occurs daily independent of actual diameter growth. Pines, then, not only sigh when in melancholy moods but they also have a sort of inflation and deflation of chest that naturally go with such sentimental demonstrations.

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D-3 Favors Service Stripes: In a recent letter to the Forester, the District Forester stated the sentiment of the Southwestern District as being favorable to inconspicuous service stripes in accordance with the article "Marks of Faithfulness" by Assistant District Forester Guthrie of Portland in the Service Bulletin of January 28.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Winter Timber Reconnaissance: The possibility of doing timber survey work in the winter has been generally underestimated in the intermountain region. During the winter of 1922-23 the Idaho Forest had a crew in the field west of Payette Lake, the work going very well. Encouraged by this, during the present winter the Idaho, Boise and Teton Forests are each represented in the work and it is proving quite feasible all through the winter as long as the snow is deep enough for snowshoeing. Conditions are especially good after the middle of January, as the snow is packed so that going is good for most of the day. Such travel is easier in the winter in a brushy and windfall country than in summer. In a country covered by G.L.O. survey where only a drainage map is required, a one-man crew can be used and the work can be accomplished fully as cheaply as in the summer. It also has the advantage of being done at a time when other important work cannot be done.

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An Outburst from Our Jazz Supervisor:

"Your O-610 letter of March 13 is received.

"Property lost! Eyes focused wickedly on outstanding horrible examples! Aspersions on Sawtooth officers! Mean cracks - doubly mean if untrue! Hot dog!!!

"Our records show one slippery, elusive pair of pliers and one key lost - value $1.91. Property condemned (worn out by Herculean labor) and destroyed, of which you include nothing, had a value of $185.20.

"We broadcast injured innocence on a violent wave-length! Without procrastination we focus your attention on this glaring slander. Quick, Watson, an uncondemned pick handle!"

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DISTRICT 5 - CALIFORNIA DISTRICT

Issues First Water Power License: History was written on March 8 when District Forester Redington placed his signature to the first license under the Federal Water Power Act to be issued otherwise than from the Washington offices of the Federal Power Commission. The license was issued to Mitchel Terzich for lighting and domestic purposes at his special use summer home on Eagle Creek near Brightman Flat on the Stanislaus Forest.

The new procedure thus inaugurated is in pursuance of Order No. 17, promulgated by the Federal Power Commission on October 22, 1923, authorizing the District Foresters to issue short-term licenses under the Federal Water Power Act for projects of not over 40 h. p. capacity, located within the National Forests. Full instructions for handling such cases are being sent all Supervisors, together with copies of the form of application. The application requirements and the procedure are far simpler than have obtained heretofore, and the new method of handling these cases is believed to be a big step ahead in the administration of small power projects on the National Forests.--R.R.R.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

New Folder Maps to Appear: Supervisor MacDaniels of the Siskiyou, who has been on detail in Public Relations, has been preparing and editing material for folder maps for the Siskiyou, Siuslaw, Malheur and Wallowa Forests, for none of which is there a folder map at present.

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Supervisor Hall of the Santiam Forest has recently been elected to the position of Chairman of Camp Committee of the Boy Scouts Organization, which includes four counties, namely, Linn, Marion, Polk, and Benton.

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Fire Burned Half the roof from the Dirtyface R. S. at Lake Wenatchee, 10 a. m., January 14. Two extinguishers were insufficient, and use of school district hose by teacher was necessary. Good thing we deeded land within 150 yards of station to School District. Ranger slid off roof but landed in 4 inches of soft snow. Spark caught on outside of shake roof. Dinner was at 12 as usual.---C.J.C.

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U.S.G.S. Program: The U. S. Geological Survey has announced its intention to survey, during the coming field season, the Mt. Hood Quadrangle, about one-third of which was mapped a number of years ago as a part of the Mt. Hood special sheet. The quadrangle lies almost wholly within the Mount Hood National Forest.

If funds are available, it is probable that the Survey will also map the Marble-Mount Quadrangle which lies east of Mt. Baker and entirely within the boundaries of the Mount Baker National Forest.---A.H.H.

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DISTRICT 8 - ALASKA DISTRICT

Winter Navigation on the Tongass: Ranger VI, the new Forest Service boat which was launched in Seattle last August, has covered since being assigned to the Juneau District on November 16, 1923, 2,208 nautical miles up to February 29, 1924. This was all in Alaskan waters and on Forest Service work. The activities involved were fox farm appraisals and other forms of special use, timber sales, land adjustments, boundary examinations, and water power investigations.

The mileage by months is as follows: November (last half), 323; December, 621; January, 645, and February, 619.

These facts should be a revelation to our neighbors in the States who think of Alaska as being frozen up and closed to navigation for six months out of the year. I do not want to give the impression, however, that we did not have some tough going during this time.--H.E.S., Tongass.

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A FOOL THERE WAS

A fool there was, and he drove a jit -
Even as you and I.
He loaded his folks and his camp outfit
And sought the mountains high.
He found him a place that looked right nice
Where the grass was green and the waters iced,
Where the song birds sang and the stately trees
Hummed a sleepy tune in the summer breeze.
He made his camp and he finished the creek
Where his kiddies played in the shade
Cleansing their bodies and rinsing their souls
In a Paradise God had made.

A restful stay for a couple of days
Then the open road and away,
Leaving behind in the timber's shade
The rubbish and trash his camp had made.
"It doesn't look nice, but we don't care,
We never expect to come back again!"
So he drives away, and a slumbering spark
Glowed bright that night in a national park
When the wind stirred the ashes gray.

Yea, he was a fool this tourist gay;
And he might have been you or I -
But he never will make that camp again
No matter how far he drives,
For the stately trees and the sparkling pool
The carpet of grass that was green and cool
Have been seared by the hand of a careless fool
That might have been you or I.
For that slumbering spark in the ashes gray
Was a roaring Hell at the dawn next day -
While the fool drives away o'er the mountain's crest
In his jitney tour of the Golden West.
--Sam F. Kiefer, Yakima, Wash.

Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

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SPRAYED COTTONWOODS SHED NO SEED

By Geo. B. Sudworth, Washington

Everyone knows how annoying the cottonlike seed of poplars is when it is blown hither and thither from the pistillate trees. Probably less annoyance is experienced from these trees in eastern towns and cities than in the West, where droughty conditions often make it necessary to depend on cottonwoods for shade. But wherever this nuisance exists, the trees do not have to be taken out in order to be rid of their seed. Mr. W. H. Long of the Bureau of Plant Industry has recently demonstrated that a two per cent solution of sulphuric acid sprayed upon pistillate trees when they are in bloom kills the flowers so that they will bear no seed. No other harm is done because the poplars put forth their flowers a week or more in advance of their leaves.

Only the pistillate or female trees need to be sprayed. The flowers of these trees are borne in greenish clusters, somewhat resembling the flowers of grapes, The staminate or male trees may be recognized by their fingerlike clusters of purplish flowers.

A power spray pump is used, and the cost per tree of applying the spray in Albuquerque, where the trial was made, was from 23 to 32 cents. While the acid solution does not injure the tree, its harmful effect upon lawn grass beneath may be prevented by watering it before and immediately after spraying the trees. The iron parts of the spray pump through which the spray passes must be of brass, copper, or some other noncorrodible metal. Moreover, the operator should wear old clothes or a rubber suit,and to prevent injury to the skin the hands and face should be washed immediately after the operation.

Spraying the trees with crude oil, kerosene and gasoline was found to kill the flowers, but, excepting gasoline, these agents are likely also to kill many twigs, while the drippings would be equally injurious to the lawn grass.

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EXPANSION OF THE TIMBER INDUSTRY OF ALASKA

By B. F. Heintzleman, Alaska

During the calendad year 1923, 45,000,000 board feet of timber was cut under sale contracts from the Tongass and Chugach National Forests in Alaska. Forty million board feet of the above amount was taken from the Tongass National Forest in Southeastern Alaska, which is the center of the lumber industry in the Territory. The total 1923 cut represents a very material increase over the annual cut of the two preceding years, which was 22 million feet in 1922 and 14 million feet in 1921. The great bulk of the timber manufactured into lumber in Alaska comes from the National Forests.

Lumbering in Southeastern Alaska is now getting established on a better foundation than in the past. Prior to the last two years the mills depended almost entirely on the local market, and, as this is limited and also very erratic owing to the varying demands of the salmon canneries from year to year, the mill operations were seasonal and interrupted and covered only from 5 to 8 months of the year. But the general lumber markets have now been entaoed and the additional amount and better quality of the material cut for export from the Territory have greatly lengthened the milling season and otherwise strengthened the local industry. The exports for 1923 totaled 6,400,000 feet, composed of one-half clears and one-half merchantable grade. The principal local demand is for common lumber. All of the larger mills were able to operate well into the winter months and two of them worked until the end of the year. A number will reopen in the near future and there is every reason to believe that from now on the lumber industry of this section will be practically continuous throughout the year.

Further evidence of the healthy condition of the industry is the fact that the three largest mills plan on doubling their capacities and the principal logging concerns are purchasing much new machinery.

While the mills of Southeastern Alaska cut Sitka spruce almost entirely, the output in the Prince William Sound region of the Chugach Forest is largely of hemlock. This is due to the local demand for ties and other rough construction material of this species by the Copper River Railroad.

The Government-owned Alaska Railroad also uses large quantities of hemlock for ties and took about 6 million feet of timber, stumpage free, from National Forest lands along its right of way for this purpose during the year. The railroads of Alaska are getting excellent service from hemlock ties, which have an average life here of 9 to 10 years.

The pulp and paper industry has not yet developed to any extent, but the prospects are favorable for one or more large plants within the next two years. A firm of San Francisco capitalists has secured Federal license for power development at Cascade Creek on Thomas Bay near Petersburg and has been given a conditional award of a near-by timber unit of 2 billion board feet on the National Forest. This power and timber unit is generally regarded as one of the best pulp and paper offerings in Alaska.

The pulp mill at Speel River near Juneau, which has been producing 16 tons of air-dry pulp a day for shipment to the Port Angeles paper mill in Washington, plans to install a small machine for the manufacture of low grade paper from ground wood pulp. Company representatives are now in the East selecting the machinery. The disadvantage of shipping pulp to the States for manufacture into paper is due to the fact that the water content of the pulp cannot be reduced much below 50 per cent, and this causes an excessive freight cost.

There is every indication that 1924 will be a better year for the timber industries of Alaska than has ever been experienced heretofore.

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INFORMATION WANTED ON TUMBLEWEED

By Will C. Barnes, Washington

In the Branch of Grazing we were discussing the common tumbleweed (Cycloloma striplicifolia), and to our surprise found we knew very little about its distribution. There is but one specimen of it in our collection.

The Washington office will be glad to have everybody keep this plant in mind during the field season and collect specimens, sending them in for identification with the proper information on the forms in order that we can get some idea as to its distribution in National Forest States. In many instances it will probably not be found within the Forest boundaries, but plants secured from near-by areas will be welcomed.

This tumbleweed should not be confused with the well known Russian thistle (Salsola pestifer), which is called tumbleweed in many parts of the West. A great deal of difference will be noted between these two plants when placed side by side. The true tumbleweed (Cycloloma striplicifolia) is a large much-branched plant, with lance-shaped, sharp-pointed, sharply-toothed leaves, and with distinct horizontal wings on the mature sepals of the flowers. In color the tumbleweed is light green, almost yellow. The Russian thistle of course everybody knows and identifies at sight, so that a description of it is not necessary.

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WHY WE ARE CHESTY

(From the Congressional Record)

During the debate in the Senate on S. 2148 to extend certain authority to the Forest Service, some very complimentary things were said of Forest Service members which is in striking contrast with the former castigation meted out to us in the earlier days when the National Forest policies were so misunderstood. The following is a verbatim statement from page 5317 of the Congressional Record:

Senator Fletcher - "I had some experience last summer as a member of the special committee on reforestation, and we came in contact with the National forests and national parks. The men connected with the Forest Service, I desire to say without any hesitation, in my judgment are the finest type of men, the highest class of men connected with the Government in any capacity whatever.

Senator Norris of Nebraska - "I want to confirm the statement of the Senator from Florida, because it agrees with my view. I have come in contact with them in an official capacity many times. I think we have in the Forest Service, so far as I know, without exception a fine set of men who are going their full duty at a very meager pay.

Senator Fletcher - "There is no doubt about that."

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WHO WANTS A GOVERNMENT HORSE?

By Roy Headley, Washington

It would cost the Forest Service less to furnish the horses used by Rangers and others than it costs the men themselves. The Service could breed saddle and pack animals at favorable locations and could not only turn them out at low cost but could breed good strains and furnish better stock than it is usually possible for the Ranger to buy. Then when a Ranger was transferred he wouldn't have to make a hurried sale of his stock at a personal loss, or ship at sometimes excessive cost to the Government.

But as a rule good horsemen want animals of their own choosing, trained by themselves and not to be used by anyone but themselves. The Service hasn't the funds now to furnish all stock and horse equipment used by Rangers, but if it is right to do so, it could be brought about in time.

Is it the right thing for the Service to do?

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WASHINGTON NOTES

Get-Your-Picture-Taken Week: Forest Protection Week is proving so popular around the Atlantic Building that a Get-Your-Picture-Taken Week was observed. Each Branch was lined up separately, taken out, and shot in the alley. Some there were, to be sure, who objected to being shot in said alley, and some trouble was also experienced over whether the bobbed-hair girls should be in front or behind the bald-headed men.

But things went along very smoothly on the whole until Bill Sparhawk, the well-known statistical shark in the Research Branch, insisted on posing with an Elusive Statistic held in his hand. Sparhawk claimed that his was the only Statistic in the Branch and that it should, therefore, be in the picture.

E. S. Shipp, the genial photog., warned that the camera might break if Sparhawk insisted, and sure enough that's what happened. Consequently, the Research Branch had to be photoed the second time, but without the Elusive Statistic which during the confusion of fixing the broken camera escaped to its native lair. 'Tis said that it will take the Research Branch at least a year to find another Statistic.

By the way, prints of these Branch pictures will be placed on sale later on. Don't crowd, folks!

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HOW MANY RANGER FAMILIES WANT MAGAZINES?

In a letter to the Editor of AMERICAN FORESTS AND FOREST LIFE, the magazine of the American Forestry Association, an eastern Club-woman writes, "I would like to have a list of 25 names of isolated ranger families to whom our club could send a story magazine like The Ladies' Home Journal, Woman's Home Companion, Everybody's, Munsey's, etc. We want to make a personal contact between those who guard our forests and those who enjoy them, and this might make the rangers feel that the public is appreciative of their work as well as interested in them as individuals."

This is the second letter received within a month from women who wish to send magazines to the wives of the forest rangers and if the ranger folk desiring to avail themselves of this opportunity to obtain a current periodical will forward their names to AMERICAN FORESTS AND FOREST LIFE, THE LENOX BUILDING, WASHINGTON, D. C., stating the magazine preferred, they will pass the word along.

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FOREST PRODUCTS LABORATORY

Our World Visitors: A week at the Laboratory rarely passes without one or more visitors from foreign lands. Mr. Jacques Bienfait of Holland has been here for some time, and just recently Mr. M. Juhlin Dannfeldt came here from Sweden: During the same week Mr. Ricardo Rodriguez from Mexico arrived to study the Laboratory, Mr. O. W. Pflueger from the Philippines made a brief visit, and Dr. Wolman from Germany was here.

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Douglas Fir Kiln Drying Work Going Well: The drying of Douglas fir in the internal fan kiln promises to be as successful as similar work done in the yellow pine in the South.

It is already apparent that the kiln will operate successfully and that edge stacking is entirely satisfactory for this class of drying. It is estimated that the rate of air movement through the lumber approaches the tremendous figure of 500 feet per minute when the kiln is in full operation.

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FOREST EXPERIMENT STATIONS

Spruce Budworm in Maine: In determining the yields of second growth spruce and fir in the Northeast, members of the Northeastern Forest Experiment Station encountered in almost all parts of the spruce region in Maine the after effects of the spruce budworm. The damage by this insect to stands of spruce and fir over twenty years of age has been enormous. In a number of places, as high as seventy-five per cent of the stand has been killed outright. The damage, however, is not only limited to trees killed, but is seen also in a great decrease in growth in the last 10-year period. Out of 800 trees bored into, only a very few showed normal growth. A range of 20-25% of the usual diameter growth was commonly attained. Conservatively estimating, one could say that on the acres studied, the green surviving trees, on the whole, rarely made more than fifty per cent of their usual periodic increment, which figure would be much more reduced if the trees killed, amounting to more than a minimum percentage, were included. It has also been noticed that white spruce does not enjoy the immunity to budworm attack with which it has been formerly accredited. A cursory examination of the spruce regions of New Hampshire and of the coastal region in southeastern Maine showed that the damage in those places was not severe, if at all present. Further work on this phase is to be carried on during the summer by the Northeastern Forest Experiment Station.

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DISTRICT 1 - NORTHERN DISTRICT

Are Pine Squirrels as Strictly Vegetarian as was Daniel? On several occasions I have observed the common pine squirrel associated with the woodpeckers in their work on trees dying from insect attacks. The time of these observations has been in late winter or early spring while the snow was on the ground. I cannot say that I have ever actually seen either the woodpecker or squirrel eating any insect, but I have frequently gained the impression that they were both busy removing the outer bark and concluded that they were both after some beetle larvae or wood borers for food.

This belief that pine squirrels render some service in controlling insect infestations is one of the reasons I have always opposed promiscuous poisoning of squirrels as a measure of seed conservation.--W.W.W.

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Game Reports: In response to a request for a tabulation in connection with the annual game reports, some interesting figures were recently submitted to the Forester. Of the game area in District One, which comprises Montana and Northern Idaho, eighty per cent is within the boundaries of National Forests. Of the total game animals, 89,622 or 78 per cent, are found within the National Forests, and 25,278, or twenty-two per cent, are found outside the Forest boundaries. These game animals include elk, moose, deer, antelope, mountain sheep, mountain goats and both species of bear.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Newspaper Publicity for 1923: Clippings sent in by the Forest officers from the papers published in and near the Forests during 1923 showed that 10,800 inches and one full page of material was clipped and sent in. It was classified as follows:

Operation	4,252	inches	
Accounts	170	"	
Lands	197	"	
Grazing & Game	1,749	"	
Forest Management ...	1,800	"	
Roads	1,508	"	
Recreation	1,124	"	and 1 full page
	10,800	"	" 1 " "

There was a great deal of material published which was not clipped and sent in according to reports coming in from the Supervisors.

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Road Logs: The data accumulated by Engineering and Public Relations in 1923 is being placed on tracings ready for the making of the etchings. The Rocky Mountain Motorists, Inc., have agreed to publish these new logs, covering the Western Slope of Colorado, and the road logs formerly got out by the Forest Service, together with road logs from the roads in the State not included in the Forests, in a booklet to be distributed in time for the tourist season of 1924.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

County Agents and Forest Protection Week: The Extension Directors in both Arizona and New Mexico have expressed themselves as heartily in favor of their county agents cooperating in making Forest Protection Week a success. A lot of information to acquaint them with Forest Service activities will be sent them in a few days. Copies will also go to Supervisors. Where forest officers can get in touch with county agents they may be able to make their cooperation still more effective. The material for county agents may be useful also to other individuals or organizations which would cooperate. Possibly Boy/Scout Masters, school teachers or others may want it. Additional copies may be requisitioned from the district office.

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Sudworth Says it is Probably Pinus Apacheca: Some weeks ago Lumberman Walter J. Perry of the Carson announced the finding of a pine tree with unusually long needles and cones double the size of those of ordinary western yellow pine. He submitted specimens to Mr. Sudworth, Dendrologist, who in a letter to Mr. Perry expresses the belief that the tree on the Carson is a species distinct from *Pinus ponderosa*. "As nearly as I can determine from these specimens," says Dr. Sudworth, "the tree is what I believe to be a northern form of *Pinus apacheca*. It is variously considered a species either closely related to *Pinus ponderosa* or just a form of the latter. If you have at hand a copy of my Bulletin 460, 'The Pine Trees of the Rocky Mountain Region,' you will be able to learn the history of this interesting yellow pine, which to me is specifically distinct in its long, stout leaves, and in its cones which are nearly twice as large as those of any form of *Pinus ponderosa* known to me." A characteristic of the seedlings of this species, according to Dr. Sudworth, is that branching does not take place until the young plants are four to six years old.

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Some Rim! Statement in claim sent to Washington for damage to automobile: "Traveling on the rim between Baker's Butte and Leonard Canyon, a distance of 27 miles, etc." Comment by Solicitor's office: "It appears he drove his machine on the rim for 27 miles. No reason is given why the car was driven on the rim. It is inferred that it was by reason of a punctured tire. This constitutes negligence." As far as known the Mogollon rim, Arizona's second greatest geographic feature which has been made so famous in many stories and movies by Zane Grey, has never heretofore been so maligned. Further, this is one rim that as far as we know has as yet been unfitted with a tire.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Additions to the Nevada: Two additions to the Nevada Forest are being requested by the settlers in the vicinity, one on the east side and one on the west side of the white pine division. The total area involved is approximately 240,000 acres. The land is chiefly valuable for grazing, although about 50 per cent of the area is covered with stands of pinon and juniper. Both petitions are profusely signed, it being understood that every settler concerned is in favor of the proposed additions.

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D-4 Big Things: The Chief of Maintenance claims to have the BIGGEST baby, five months old to-day, in the District. Weighs 18 pounds and can stand up on a hand in mid-air. He can stay awake at night longer than any other in the District also. Two teeth have also passed the local examination board.

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DISTRICT 5 - CALIFORNIA DISTRICT

Deputy Supervisor Sloan Crosses Great Divide: Thomas W. Sloan, in charge of the work on one of the two divisions of the Angeles National Forest, crossed the Great Divide on the evening of March 15 last.

He entered the Forest Service on April 20, 1906, as a Forest Guard on the San Gabriel Reserve - now a part of the Angeles National Forest - was appointed Assistant Ranger on December 1 of that year, and in the succeeding seventeen years rose through the ranks of Forest Ranger and Deputy Forest Supervisor to the position of Forest Supervisor.

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Falling Into Step: Convinced that highway advertising signs detract from the natural beauty of the great routes of travel of the Pacific Coast, the Standard Oil Company of California has decided that it will erect no more such signs and that it will immediately remove all of its signs of this nature now standing. Hereafter the company will confine its use of signs to commercial locations.

The company feels that the splendid scenery so characteristic of nearly all of the highways of California, Oregon, Washington, Nevada, and Arizona should be unmarred, and on that account is willing to sacrifice the advertising value of the signs.

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No Smoking Allowed: On March 14 the District Forester, under authority vested by Section I of Regulation T-1 of the Secretary of Agriculture, issued instructions to the Cleveland closing certain designated areas on that Forest to all forms of smoking during period of fire danger until further notice. Violation of this order constitutes a trespass against the United States and is punishable as such. Publicity is to be given this order, appropriate signs posted on the areas, and no camp fire permits are to be issued covering the closed areas.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

International Fire Cooperation: By request, some 30 pieces of fire prevention publicity material have been sent by D-6 to the chief foresters of New South Wales, Tasmania, West, South, and East Australia, and New Zealand. They, too, have fire problems.

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Red Enemy from July 1 to December 31, 1923, was shown at 27 towns in Washington to 22,275 people, and in 31 Oregon towns to 31,156 people, or a total of 58 towns to 53,431 persons. The five Department films were shown in D-6 from July 1 to December 31 in 95 towns to 60,801 people. The films are still being shown.

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From Start to Finish: Fire records on the Chelan show that the first and last fire of the 1923 season was handled by Supervisor Harris and each case shows a conviction with payment of fine and costs.--L.A.I.

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DISTRICT 7 - EASTERN DISTRICT

Editor's Note: No, gentlest of readers, the rumor that District 7 has seceded is unfounded. In proof of this we proudly offer the following notes and perhaps - perhaps, mind you - we shall have some more when the District correspondent recovers from the severe mental effort of compiling these.

Invalids Seeking Light Employment Please Note:

"District Forester,
Washington, D.C.

March 7: Guard Sam Rudder saw Ed Hale fire National Forest.

March 18: Warrant secured; arrest of Hale.

March 23: Hale assaulted Rudder, beating him severely.

March 28: Rudder's condition rather serious, send supply form CA2.

Plymale"

Merchant Offers Advertising Aid: Following a little talk at a Rotary luncheon in Russellville, Arkansas, in February, P. S. Sheppard, a local jeweler, called at the Supervisor's office and offered to devote one or two lines of his ad in the local paper each week to a forestry message or slogan. The first ad with an appropriate slogan appeared February 28. Mr. Sheppard also offered to help line up other local merchants, and a canvass of some 25 principal advertisers of Russellville is now in progress. For some time to come, and particularly during Forest Protection Week, the Courier-Democrat at the Ozark headquarters should fairly bristle with National Forest "hot shots" from the pen of Forest Clerk Hall.

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Store Does Good Business: It was noted in Gorham last summer that the A.& P. store was copping most of the business from the campers at Dolly Copp camp in the White Mountain Forest six miles away. In an interview with the A. & P. manager he stated that this business mounted to at least $150 per week from July 1 to September 15, or a total of $1,650 for the season. This store does not handle fresh meats, fruits, milk or vegetables. Do merchants generally recognize the value of National Forest public camps within their reach? Have any of your local merchants ever contributed a fireplace or other camp facility to help the game along?

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A Bear Story from Way Down East: The following is quoted from a recent letter by Ranger Spinney to Supervisor Yarnall, White Mountain:

"I marked a large yellow birch to be cut on the Currier sale. The tree had a hole in it about 35 feet above the ground where a large limb had split off years ago. Two Frenchmen cut the tree, one of them walked out on the bole of the tree and notched into the top to see if it was hollow. After he had cut a hole through, he heard a scratching noice and a bear stuck his nose up through the hole. In a few minutes there were ten or twelve men there. They tried to get him alive but he was too much bear. He clawed the front of one fellow's sweater in shreds. Finally they had to kill the bear with clubs. He was a dandy pelt. Only weighed 64 pounds. Not an ounce of fat on him. The inside of the tree was as smooth as glass where he had clawed it. His bed was 16 feet below where he went in. Can you beat this for a bear story?

Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

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THE TRESPASS EVIL

By Paul H. Roberts, Sitgreaves

In the Service Bulletin of January 7, Mr. J. N. Langworthy suggests a cure for trespass through impounding the stock. I agree fully with him that the present legal and administrative procedure is not adequate to compel a healthy respect for the grazing administration. For cases of so-called petty trespass, which in the aggregate may amount to a serious situation, I agree with Mr. Langworthy that impounding is the proper course, preferably through an impounding regulation, which does not lean upon a State law. The Solicitor in an opinion dated April 14, 1923, states:

> "If there is real need for such a regulation, the accomplishment of the purpose desired would necessitate the setting up of Federal machinery corresponding to the State impounding system. This would be quite complicated, as it would require the taking up of the stock and the holding of it by a Federal officer, the ascertainment of ownership, appraisal of damages, service of adequate notice upon the owner, advertisement and sale of the stock in the event of failure of the owner to pay damages, and care of the stock pending settlement of the trespass or sale of the stock."

While this would probably be true for cases involving large numbers of stock, it would appear entirely feasible to handle small cases under an impounding regulation.

I have in mind a case involving a small number of stock and injunction proceedings. The case was submitted in the fall of 1922, and in February of 1923 copy of the regular letter of the Attorney General to the U. S. Attorney was received. The case was filed with the Court in the fall of 1923, and the stock are still grazing on the Forest.

The question might be asked why were the stock not removed by Forest officers. Because when they reach the Forest boundary their authority to handle the stock ceases, and it is immediately back on the range. Further, such procedure does not create respect for the regulations on the part of the offender.

Again, injunction is asked for and just when it becomes necessary to prove that the stock is on the Forest after a lapse of six months or more after the trespass is reported, it is found complacently chewing its cud on the trespasser's own ground.

Why not, as an additional remedy, invest U. S. Commissioners with authority to try and impose penalties in Federal cases involving trespass charges up to $100?

In the large case the present procedure, as shown by the records, is productive of results. Very few of these cases have resulted in adverse decisions for the Government, and the damages secured are usually adequate to inspire a respect for the grazing administration. Also, in such cases, permanent injunctions are usually secured where necessary, and thereafter the Service holds the whip hand.

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"ALL OUT OF STEP BUT JOHN"

By Geo. H. Cecil, D-6

I have abstained from any discussion of road widths on minor roads up to the present but when my esteemed friend, Major Kelley, undertakes to show that a 9-foot road in our rough and mountainous districts of the West is a safe road either from the standpoint of the general public or ourselves I must perforce rise in protest.

In the first place I think the Major rather stretched a point when he undertook to compare roads in a country like Wisconsin with our mountainous region, regardless of the width of the road discussed. He might have enlightened us on this point if he had given us a comparison of the mileage of "straight road" on which the 68.6% of the accidents alluded to occurred and the mileage of curves responsible for the 16%. Undoubtedly it was because the article he quotes does not give such percentage. It does, however, give us one reason for the great number of accidents on straight roads as compared with the curves that "the great majority of State highway is straight."

Another point to consider, and in my opinion one of the most important, is the amount of traffic on a given road. This is of particular importance when the figures quoted are considered. The main State highways studied included only 10% of the highway system of Wisconsin but is estimated to carry 65 to 70% of all rural highway traffic. Further, "reports of accidents show that 75 to 80% of the total accidents occur on this system due largely to the concentration of travel." My own experience has been that, regardless of the width of a road, by far the greatest percentage of accidents is caused by the inadequacy of the road to carry the traffic. This will be found to be the case regardless of the width or character of the particular road considered. It is shown on our main State highways by the number of accidents occurring in passing other machines or machines parked along the roadside. This is also borne out by the Wisconsin report which states that "the great majority of straight road accidents are due to one car trying to pass another."

I contend, therefore, that our 9-foot roads along steep side hills (we can build them wider on the level where the danger is less) are dangerous for ourselves and others when there is any travel at all aside from our own. I've driven a good many miles of narrow mountain roads along steep hill sides and while I am no "nervous woman" I can truthfully say that it has not been an enjoyable experience. If the roadbed were always dry and firm it would be bad enough, but in the spring and fall the negotiation of a 9-foot road, along a steep bluff, particularly the backing in and out of turnouts, is not something a man goes miles to enjoy.

I have heard the statement made that speeding was the cause of most auto accidents. I'll admit that the majority of them do occur from that cause, particularly when gasoline is mixed with alcohol. As shown by the figures in the Wisconsin article, however, 75 or 80% of all accidents occur on the main highways of the State, which in turn represent but 10% of the total. It may be that 90% on which only 20 to 25% of the accidents referred to occur are 9-foot roads, but I doubt it. Even if they are it would be hard to convince me that anyone, Forest officer or tourist, will do any more speeding on an 11-foot side hill road in the mountains than on a 9-foot one. If he does he'll meet the fool killer early in his wild career.

You hear the statement made that the West has miles of such narrow roads. You bet it has, but you never hear the West boasting about it. It knows that such roads were built for the use of wagons and it is changing them to roads suitable in width and alignment for auto travel just as fast as it can. If you look over any map showing the State highway systems even in the Western States, you'll find the bulk of the work is being done in the improvement of existing routes of travel to make possible the use of modern means of conveyance rather than in building new ones. And you won't find many of the new ones 9 feet wide. As an example - the Twenty-five Mile Creek Road (9-foot) on the Chelan completed in 1923 was undoubtedly a good piece of work and the county and the Forest Service both got their money's worth. Apropos of the width, the following is an extract from Supervisor Harris's letter of February 25: "They (the county) propose to widen the whole road this spring."

Yes, they maybe "All out of step but John," but somehow I can't believe it.

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SAFETY CIGARETTE EXTINGUISHER

By J. G. Peters, Washington

A device recently received consists of a small metal cone $1\frac{1}{4}$ inches long, oval shaped at the mouth ($\frac{1}{2}$ in. the long dimension) so as to accommodate Turkish cigarettes, and with a ring at the apex to which is attached by means of a red cord a tag 1-5/8" x 3-5/16" containing the following wording:

(Front)

After you have finished your smoke put out the fire in your cigarette with this

SAFETY
CIGARETTE
EXTINGUISHER

Poke the lighted end into the extinguisher and leave it about ten seconds; a few trials will show you how long it takes to put out the last spark. This is a simple and effective means of preventing many fires.

(Over)

(Back)

IT PAYS

to protect the Forests from Fire, as fires destroy forests, sport and business. YOU share this loss. Carelessness causes fires and you can't afford to be careless.

Smokers are cautioned particularly in regard to the careless handling of lighted cigars, cigarettes, pipes and matches.

Distributed by the
Kennebec Valley Protective
Association,
H. J. Craig, Sec.
Bingham, - Maine

(Over)

Across the front is stamped with a red stencil "Use it in the Car."

Mr. Craig has been asked to send one of these devices to each District Forester and each State Forester.

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THE TASTE OF THE WORK PLAN

By Silas B. Helms, Black Hills

Some men like "moonshine," glory in its taste; some get terribly sick at the smell of it, yes, even sight of it; and others make use of it whether or no. Fill the bottle with "work plan" and pass it around. Will it not be received in the same way? I think so. Some are going to like it, use it, profit by it, and get "all lit up" about it. Figure for yourself as to the others. Human nature will always determine the success of anything and we all know that in the aggregate there will be the three divisions, - for, against, and the others.

One will take the work plan idea, make it grow and profit by it. That individual will be a success. I'll make it so strong as to say he did not need the plan, for he has been planning. One will see no good in the plan, always be sick of it. Another will drift as the wind blows.

Therefore, while we may all think of ourselves as a success, if we are not absolutely sure of it, there's no time like NOW to cultivate an appetite and learn to make the work plan taste good!

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RECEIPTS AND APPROPRIATIONS

By Roy Headley, Washington

Nothing would help the Service more in getting appropriations for improvements, personnel, and equipment than to be able to show that the National Forests are self-supporting. Large timber sales and some other sources of receipts are often beyond the control of most Forest officers. But if every officer who has any possible chance to influence receipts were to analyze systematically the opportunities open to him and then follow up any leads he discovered the resulting small rivulets of income might unite to make a new river of receipts that would put us in the self-supporting class at an early date.

Is there a timber sale which could be handled with existing personnel and which could be started by a little salesmanship? Is there an unused range which could be made an income producer by administrative ingenuity? Are there chances to get summer homes or other special uses established and bringing in regular returns?

If it's true that the size of our receipts matters greatly in getting appropriations, should we not, each and all, give more serious attention to ways and means of increasing revenue-producing business, particularly where the building of such business is desirable as a means of carrying out our plans for management of our National Forest resources?

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WASHINGTON NOTES

Predicting Dangerous Forest Fire Conditions: At the recent conference of Research and administrative men at Madison, two or three days' time was taken up on the subject of predicting fire weather and the means which had been developed at various experiment stations for doing so. Apparently one of the Minnesota rangers is sold on the idea of instrumental observations for the purpose of determining dangerous fire periods as well as the absolute value of such observations. Two ranger districts in Minnesota have been supplied with barometers and humidity instruments, and the Rangers themselves are studying conditions and making their own predictions. A recent report from the State Forester makes the observation that after studying and observing these instruments for a year, one of the Rangers has been able to predict conditions extremely well. The Ranger has made the statement that he would rather lose a patrolman than his weather instruments. The State expects to equip some more of the rangers with weather instruments for the purpose of carrying this experiment farther.--C.R.T.

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Some Changes in Names: The names of the Washington and Oregon Forests were recently changed to Mt. Hood and Mt. Baker, respectively. These changes were made because of the confusion existing when State Forests and National Forests were mentioned. The Battlement was changed to Grand Mesa, the latter name being considered more descriptive of the locality and the one more commonly used locally.

Another change recently made was in the case of the Fort Valley Experiment Station which is now known as the Southwestern Station.--M.H.

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FOREST PRODUCTS LABORATORY

Shoes with Sawdust Soles: We have paper soles for shoes, and now we may get them made of sawdust and laboratory glue, if one inventor's ideas blossom into a commercial product.

In requesting information on our waterproof glue, he says that he would like "to renew worn-out soles by simply applying an alternate layer of glue and sawdust until required thickness is reached." He thinks that our "wonderful glue discovery" will help him if the glue is waterproof and elastic.

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Trophy Cup Given to Laboratory by Research Convention Visitors: A beautiful silver trophy cup was given to the Forest Products Laboratory members by the research visitors who held their sessions at the Laboratory recently.

In presenting the cup, Mr. R. D. Forbes said it was given in appreciation of the efforts of the Laboratory people to make pleasant the stay of the visitors.

The cup is to be awarded as a prize in some sport in which both men and women take part.

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DISTRICT 1 - NORTHERN DISTRICT

Want Grazing Assistant: The joint Ranger meeting of the Absaroka, Beartooth and Custer Forests recommended that, if necessary, reductions be made in the amounts now recommended for the administration of the five eastern Montana Forests for the employment of a Grazing Assistant to work on the five forests for the purpose of assisting in training the ranger personnel in range reconnaissance. This is indicative of the interest shown in technical matters by the rank and file of Rangers. Mr. Headley will perhaps say it is just a sign of "easy money."

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Serious Bark Beetle Infestation: A new outbreak of mountain pine bark beetle infestation is threatening the finest merchantable sized stand of lodgepole in District 1. There is at least two billion feet of lodgepole tie timber on this area, and if kept unharmed large and continuing tie sales may be expected within the next ten years. The spread of this infestation has been very rapid the past two years and has done as much damage as fire. However, there is still one strategic line of defense and prompt and vigorous control measures will doubtless keep the beetle infestation from making further inroads to this valuable body of timber.

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Some Thoughts on Uniforms: At the Absaroka, Beartooth and Custer Ranger meeting, Supervisors, Deputies, and District Office representatives were all in uniform. Also some of the Rangers. Of the men in uniform some testified that one of the reasons for wearing them was that they could not afford other kinds of clothes; and of the men not in uniform some gave as one of the reasons that they could not afford to wear the uniforms. Much of the attitude toward the uniform depends now, as in the past, on whether or not a man has one.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Nine-Foot Roads: Inspector Kelley emphasizes the point about nine-foot roads in the Service Bulletin of March 3 that there are more accidents on wide roads than narrow ones. This is not the point at issue. Nine-foot roads are criticized by the traveling public because they are afraid to travel them. Therefore, from the Public Relations standpoint nine-foot roads are undesirable. If people speed on wide roads and drive recklessly, that is not an argument in favor of a narrow, dangerous road so that people must drive over it very cautiously to avoid such accidents. The peace of mind of the driver is important. The good will of the majority of the traveling public is necessary for the future welfare of the Forest Service. On the Lincoln Forest in New Mexico, there is a nine-foot road from a ranger station that the Ranger does not dare to travel after a rainstorm, but must resort to the slower method of traveling by horse. Is it worth while to spend money in building roads that are not passable under ordinary conditions?

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Demand Increasing for Illustrated Lectures: The call for balopticons and lantern slides by Forest Supervisors and Rangers for use, especially during Forest Protection Week, has already swamped us, our 13 balopticons and 2,000 or more colored lantern slides proving entirely inadequate. It is hoped that before long we can have at least one balopticon for each Forest, and sufficient slides so that one lecture can be used on each Forest all of the time.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Government Receives Huge Payment on Salt River Project: What is acknowledged by the U. S. Reclamation Service to be the largest bulk sum payment on the construction cost of any reclamation project ever received by the Government is a remittance in the form of a Salt River Valley Water Users Association check for $609,961.32 sent in from Phoenix, November 26, 1923. The Reclamation Record says it represents the regular sixth annual payment on the total cost of the project. About three-fourths of the watershed of the Salt River Valley project, including the Roosevelt Reservoir, lies within the Tonto Forest. Regulated grazing of the stock on the Tonto, together with further protection of the forest cover from fire and other destroying agencies, has had much to do with conserving the waters that have made this great project a success. Tonto receipts more than pay the cost of administering the forest, so that from the beginning the water users have profited from the protection of their watershed at no cost to them, nor has the protection so far constituted a liability against the public treasury.

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Accelerated Tree Growth Most Effective in Butt Log: The rapid increase in growth of the remaining trees following partial cuttings is apparent throughout the trunk of the tree, but is most evident in the diameter at breast height, or 4½ feet from the ground, according to experiments conducted at the Fort Valley Forest Experiment Station. In this study of accelerated tree growth by Herman Krauch of this station, a number of tree borings were made at heights of 18 feet and 4½ feet, trees being selected which had been released by the cutting of their competitive neighbors. The cores thus observed showed an unmistakable acceleration at both heights, but a consistently slower growth at 18 feet than at the base of the tree.

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Swift Launches Erosion Campaign: Supervisor Swift of the Tonto was the principal speaker at the regular luncheon of the Kiwanis Club of Phoenix, March 25. His subject was "The Forests of Arizona" and he told the Kiwanians some interesting facts about the public lands of Arizona. "Here is where 'Erosion' starts," said Mr. Swift in advising the DO of his intention to speak. Once on the way the Tonto will probably stay with the campaign until something about erosion is finished too.

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Can You Blame Him?: This is what a hard working Ranger said in a recent grazing report:

"Action: Commenced January 16 and ended with this report January 31, 1924.

"Recommendation: Recommended that trespasser be prosecuted criminally."

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

"Judge Not That Ye Be Not Judged": An official from another Government bureau, who has a good deal to do with the Forest Service and is frequently out in the field, told Assistant District Forester C. D. Morse a while back that he had seen lots of abandoned Forest Service camp sites, particularly fire camps, that were marked by scattered old shoes, tin cans, discarded shirts, etc. He said he really did not think it was good business to talk about neat camps the way we do and then show the public such examples as he had noted a good many times. His travels take him into several Forest Service Districts, so he is not necessarily blaming all this on District 4. Just the same, are Forest Officers' camps always and invariably as neat as we would like to see a public camp? Remember, that a single instance of this kind can undo the work of years in educating the public.

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Ranchman's Home in Four States: There is one man in the United States who is living in four different States at the same time. He is a ranchman whose house and lands cover the corners of the States of Utah, Colorado, Arizona, and New Mexico.

The windmill that pumps for his stock stands in New Mexico and pumps water into a trough in Arizona. The house is exactly in the center of where the four corners of the several States meet. The ranchman sleeps in Utah, goes over into Colorado to wash, slips into Arizona to eat his breakfast, and then sits out on his porch in New Mexico for a smoke.

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DISTRICT 5 - CALIFORNIA DISTRICT

Insignia and Publicity: So, we are getting mixed up with Boy Scouts, Y.M.C.A., and our new uniform badge is too small; it is suggested that we decorate our coat collars with nice shiny brass letters, U.S.Forest Service on both sides; have a nice green pine tree plastered on the left arm with our Forest beneath and then service stars and stripes. Ye Gods!

F.M.S. probably never met up with the old breast plate badge which was the joke of theService as well as the public. The men of the Service, especially the "old-timers" don't want to go strutting around with labels pasted all over them, telling the whole world, "See my nice shiny insignia, I'm a Forest officer and not a Boy Scout, Y.M.C.A. worker, revenue officer or Salvation Army Captain." Forest officers, especially the field men, always have and always will resent that "military stuff." I've known Forest officers who were so busy shining up their badges and polishing their puttees that they never got anything done. In my opinion the badge and uniform is distinctive enough. As for the uniform, we wear it when we can, but even at that our salary won't permit us to fight fire, build telephone lines, scale timber and trail steers with a $50 uniform on.

F.M.S. better get out and get acquainted in his community. We aren't in one of our Forest towns five minutes until we are besieged by Users of all kinds. But, of course, we are up here in the sagebrush and don't have time to walk the "great white ways." At any rate we haven't the time to go on dress parade in outside towns very often.

Publicity stuff is all well and good, but I'm beginning to realize more than ever before that we need a lot of specializing on our Forest business right in our own Forests and on our Forest jobs.

How long! oh Lord, how long! -- G.W.L.-Modoc.

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Smoking Salesman Costs Firm $15,000: While driving along the highway a s salesman for a local furniture company attempted to throw away a lighted cigarette. It was blown back into his lap and in the moment it took him to brush it aside, he crashed into a car parked at the side of the road. The chauffeur of the parked car was busy making repairs when the crash occurred. He received permanent injuries of a serious nature and the furniture company has just effected a settlement by paying him $15,000.-- "BE SURE IT'S OUT!"--C.R.M.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Growth: Ranger Eastman of the Colville Forest recently took some interesting growth measurements of western red cedar on an area where a selection cutting was made of cedar poles in 1912, and a recut made, also by the selection system, again in 1922. The trees which were too small for poles in 1912 made astonishing good growth thereafter, the selection cutting very clearly stimulating them. Trees which would not make 5 inch by 25 foot poles in 1912 now are good for 7 inch by 30 foot, or even 7 inch by 35 foot poles. Another area cut over selectively in 1914 and again in 1922 shows that the reserve trees made a diameter growth (on the stump) of from 2½ to 3¼ inches in the eight years.--T.T.M.

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Half Way Between Conconully and the Spokeman R. Sta. near the Sinlahekin-Salmon Divide on the Chelan there is an eagle nest situated on a ledge of an inaccessible bluff. By observation of Ranger Pierpont, this nest has been occupied each succeeding year for ten years and it is not known for how much longer. Each nesting season a few more limbs and sticks are added as the Eagle family returns from its honeymoon and sets up light housekeeping. The accumulated debris is now an estimated 10 or 12 feet.--F.F.W.

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Hard on RoseMary: Among the summer resort hotels on the Olympic supplied with the rubber stamp fire prevention slogans during the past season was RoseMary Inn on Crescent Lake. Mrs. Littleton, the proprietress, has also some rubber stamps very similar in general appearence and design for marking the hotel linen. One day when she was very energetically and industriously marking the linen on all four corners for good measure, she discovered, when about through with the task, that instead of marking them "RoseMary Inn" the linen bore some such legend as this - "Prevent Forest Fires - It Pays." This would rate "Cooperation" I should think.--F.B.M.

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DISTRICT 7 - EASTERN DISTRICT

Radio Put To A Good Use: Up near the crest of the Ozarks, a long way from anywhere, lives Ranger Jim Mason with his healthy, happy family. With almost no opportunity to get out into the main stream of rushing modern life it was natural that Jim dug up a nice chunk of the family treasure and installed a big 3-tube radio a year or so ago. It brought a lot of interest, education and entertainment to the hills - made life much brighter and more generally worth while. After a month or two of grand opera, oratory and jazz, Ranger Jim wondered why the air never talked forestry. So he sent to WOS at Jefferson City, Mo., a copy of Government Forest Work with the suggestion "Why not broadcast some of this, particularly the parts devoted to fire protection?" WOS fell hard. On February 20 they broadcasted the entire book to the delight of Mrs. Mason poor old Jim being out late that night on the trail of some timber thieve Missouri is a State in which forest conservation and the prospect of a new National Forest are live issues. Did Mason's stunt help? Well, it surely didn't do any harm. And then on March 26 the radio programs in the Washington Star carried this item:

> "WOS - Jefferson City, Mo., 9 p. m. Address Forest Protection Week and Arbor Day by H. F. Major."

It is not known for sure that Mason put this over, but we choose to believe that he did until we hear to the contrary. Is your Forest "in the air?"

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DISTRICT 8 - ALASKA DISTRICT

Game Propagation in Alaska: During the months of November and December, 1923, twenty-one live deer were captured from the west coast of Baranof Island and corral fed at Sitka until January 19, 1924; when eleven head were shipped by steamer to Cordova, re-shipped by gas boat to Montague Island, Prince William Sound, and there liberated. Only ten head were delivered to the island, however, as one fine buck died of seasickness during the voyage across the gulf of Alaska.

Arrangements were made at Montague Island to have the animals fed till the opening of spring. It is believed by those familiar with conditions in Prince William Sound that by the beginning of another winter the deer will be sufficiently acclimated to take care of themselves.

Out of the 21 head confined in the corral at Sitka, two have been killed by fighting with other deer.

From the eight still remaining, four bucks will be taken to Cape Henchinbrook later in the spring and turned loose to add new breeding stock to the small number ranging in that locality, the original eight head of which were introduced there in 1916. Prior to that time no deer were known to exist along the Alaska coast north of Cape Spencer except possibly a few head which were introduced on Long Island near Kodiak about 1904 and which are believed to have become exterminated, due partly to the eruption of Mt. Katmai in 1912. Another shipment of twelve deer will go to Kenai Peninsula this spring.

The method of capturing these animals is to use dogs to chase them from the small islands into the water and there they are picked up from gas boats. The contract price is $25 per head.

The money for carrying on this work was made available by the Territorial legislature of 1923. The same bill also carried an appropriation for the introduction of mountain goats on Baranof, Chichagof and Admiralty Islands, southeastern Alaska. These islands are the home of thousands of deer, as well as the famous Alaska brown bear, but no mountain goats are known to exist here naturally.

In commenting on the trip to Prince William Sound, Game Warden E. M. Goddard spoke very highly of the assistance and cooperation furnished him by the Forest Supervisor's office at Cordova.--H.E.S.

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Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

Vol. VIII, No. 16. Washington, D. C. April 21, 1924.

SHEEP GRAZING VS. GROWING TIMBER

By R. R. Hill, D-5

After reading Mr. Pearson's contribution, "Sheep Damage," in the SERVICE BULLETIN of March 3, there would seem to be no neutral ground in this perennial question. Nevertheless, I agree reasonably well with both Pearson and Chapline while studying this question in the field and I believe the opinions of silvicultural and grazing investigative men most familiar with this problem are not far apart, except geographically.

I agree that one who observes critically should be able to distinguish a tip moth from a sheep. Nevertheless, more than a few forest officers to my knowledge have failed to distinguish between sheep injury and other forms of damage to reproduction. The difficulty is not that experts are unable to isolate the cause of seedling injury but that the general administrative officer who is not a specialist on this question is the man who must determine the areas where conclusions reached by specialists must be applied. He may not be able to determine whether the lack of reproduction is due primarily to sheep grazing, to fires, to competition of other plants or to several other contributing factors. An unqualified statement to the effect that "the failure of timber reproduction on tens of thousands of acres of yellow pine land was due to no other reason than sheep grazing," may not enable the practical forest officer to apply the right sort of treatment to areas in his district where timber reproduction is deficient.

I am familiar with the same country that Pearson doubtless had in mind - having made some 70,000 critical examinations of conifer seedlings to determine the extent of grazing damage in the heart of that locality during the period from 1910-1918. While it is true that the grazing factor has prevented the establishment of reproduction in certain types to the extent pointed out by Pearson, it is also true that under average conditions in this same region 75 per cent of the yellow pine reproduction subject to damage in 1910 had survived and was in condition to make normal growth when last counted in 1918. As an "indulgent grazing officer," I will hazard the conviction that the extent of damage to timber reproduction by grazing is an accurate measure of grazing mismanagement and assert that the spotlight of attention should be held on this phase of the problem. Let us not slander sheep grazing or even goat grazing by considering them the inherent enemies of young forests, but let us set forth the manner in which grazing can be permitted without sacrificing other forest values and place responsibility for complying with these requirements upon the administrators of grazing and upon the stockmen. Some of our silvicultural friends may consider that before such a policy can be applied, the damage to reproduction in certain localities will be irreparable. They would advocate the elimination of sheep and goats as the quickest and most effective remedy. As a practical proposition, however, it is much easier to reduce grazing to a conservative basis than it is totally to eliminate it. Stockmen can be persuaded that good management is to their advantage much easier than they can be persuaded that sheep grazing and production of timber are absolutely incompatible. It is believed that the proper solution to apply over a large portion of the timber producing range is to allot the proper class and number of stock during the proper season;(in cases of damage to reproduction, early and late grazing should be avoided) and to distribute the stock properly. These are believed to be the minimum requirements of good range management regardless of timber, watershed, or other forest values. Sooner or later, we are going to reach the point in grazing administration where these requirements will be rigidly adhered to for the sake of all values concerned. Before we reach this point, however, forest officers as well as stockmen must grow accustomed to the sight of some forage unconsumed where too often we are used to seeing "dust beds" in the fall.

While we are approaching efficient range management, it may be necessary to sacrifice something of timber values along with other forest values. But this situation should be an incentive to apply proper range management rather than to undertake a policy of total exclusion. If we have clearly in mind the objectives toward which we are working, there is no logical reason why, so far as adjustments that need to be made by the Forest Service are concerned, grazing should not be put on an efficient basis within a very few years; present conditions should improve immediately. If any stockmen are unwilling to comply with these efficient management requirements, such restrictions as will bring about the desired results may then be applied without compunction.

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THOUGHTS FROM AN OLD-TIMER

By Fred Winn, Gila

March 7, 1924, was the seventeenth anniversary of my connection with the Forest Service. Seventeen years ago the Service was a struggling organization, with nearly every man's hand against it - especially in the West. Today it has the respect and support of a large majority of its former enemies, not only in the West but throughout the country. Even the present flurry in regard to the principles involved in our grazing appraisal is but a tempest in a teapot, compared to the storm of opposition which was wont to be raised a few years back, every time the Forest Service attempted to assert a policy. It may be said in passing that the Service has always, in the end, carried out its objectives in spite of rabid opposition, which speaks very highly for its principles. Our greatest element of "grief" from 1906 to 1915 was that caused by the Act of June 11, 1906. In my opinion, the greatest outstanding accomplishment of the Service within the past seventeen years was the agricultural classification of land within the National Forests. I have served under Pinchot, Graves, and Greeley as Foresters, under four Secretaries of Agriculture, Wilson, Houston, Meredith, and Wallace, and during the period of six national administrations, one of Roosevelt (whose like we shall never see again), one of Taft, two of Wilson, one of Harding and now that of Coolidge. When I went on as "Assistant Forest Ranger" at $75 per month, there were no ranger stations, as we know them - at least in the Southwest. A man was told to take his horse and bed roll and beat it "out yonder in the hills" and get his grub and quarters where and how he could. During all of one winter I "holed up" in a deserted cabin at an elevation of 8,000 feet where the snow was good and plenty and in which it was necessary to supply my own tables, chairs, cooking outfit, doors, windows (such as they were) and even my own typewriter. Such a thing as a forage allowance was unknown and a man bought his own horse feed out of his $75. The District Office was not organized at that time and Washington was central headquarters, with a staff of inspectors consisting of Bronson, Waha and Woolsey at Albuquerque. Of the men in the Service on March 7, 1907, those now in this District as far as I can recall, are Pooler, Mullen, Kerr and Scott, of the District Office and Douglas, Swift, Andrews, Simmons and Bert Goddard of honored memory.

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HUGE YIELDS FROM PLANTED FORESTS

By H. D. Tiemann, Forest Products Laboratory

Some striking examples of timber growth of pine and fir to show that our old virgin forests are not by any means living up to the possibilities of the soil in productiveness are cited by Mr. S. B. Show in the January 14 number of the SERVICE BULLETIN. His illustrations are a convincing argument for forestry practice versus nature, so far as yield is concerned. Seventy-five thousand feet b. m. per acre in 51 years is going some for pine!

I think members of the Service will be interested to hear of figures of planted pine which make these seem small by comparison! In certain parts of Australia and New Zealand our own California Monterey pine (Pinus radiata, or insignis as it is universally designated outside of the United States) has well earned its nom de plume of "Remarkable Pine." I have seen plantations in Victoria growing in height at the rate of four to six feet a year. I photographed a tree 48 feet high and about 13 years old, which during the last six years has been growing at the rate of six feet a year. At 30 years of age these trees in the best situations will yield 100,000 board feet per acre. A plantation near Christchurch, New Zealand, twenty-seven years old, is said to have yielded 75,000 board feet of sawtimber and 60 cords of firewood per acre. The trees are spaced 12 by 12 feet. In South Australia a plantation averaged 20 inches in diameter and 100 feet high in 25 years. In Tasmania a yield of 75,000 feet per acre is officially counted upon with a rotation of 25 years! There is an authentic record of one tree located in the Ovens River valley near Bright, Victoria, which made the phenomenal height growth of nineteen feet in one year. I have seen many of these plantations and can vouch for the wonderful growth.

These figures are a remarkable proof of another principle in forestry - namely, that because a tree is of poor quality and slow growth in its native environment is no sign that it may not prove of great value if planted elsewhere as an exotic. Maybe it has never had a chance to show what it is worth. The Monterey pine certainly makes a mighty poor showing in its little cooped-up area of native growth. But if once given a chance to show what it is worth, no pine in existence can match it! Or perhaps this remarkable pine transported to these far-away lands has brought with it something of the spirit of its native land and will not let any other tree get ahead of it!

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PLANS OF WORK

By E. W. Kelley, Washington

Over in District Four economy studies in use of time and development of work plans go steadily forward. Mr. Blakeslee returning to the District Office from the Minidoka Forest reports in the D-4 news sheet a stunt on the Minidoka that has worked out very nicely. "It is frequently the case that travel maps and diary analysis are made by the supervisor's office and are talked over with the rangers at the allotment conferences. The ranger usually finds himself on the defensive, trying to justify this, that, or the other thing which doesn't look just right when his work for the year is analyzed. He usually feels an alibi is needed rather than constructive thought. On the Minidoka the rangers themselves have prepared their travel maps, analyzed their time and presented a written analysis and criticism of the work they have done themselves during the past year. This study has proven a revelation to them and has shown them where they have done much unprogressive work. One ranger said after making his time analysis, that the amount of headquarters work did not look right to him and he went back and figured it over again. It still came out the same, a great surprise to him, as he had no idea that he had been doing so much of this. Guided by this careful study of their own work, the rangers are tackling the preparation of next year's job sheet with lots of pep, and expect to show a lot of improvement next year. They expect to keep up travel maps, bring them up to date each month, and will keep a sharper watch on their use of time during the field season than they have done heretofore."

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WASHINGTON NOTES

Associate Forester E. A. Sherman left Washington April 10 for Chicago, where he will attend a meeting of the Izaak Walton League of America, after which he will visit the western districts.

"Let There Be Light": If H. R. K. who "craves light" in the March 17 SERVICE BULLETIN will come on out to California he will soon learn the true meaning of the word "superior." We admit that in so far as it refers to States of the Union this superlative undoubtedly applies only to the Golden State, but of course this fact is not appreciated by those who live in the swamp lands of the Potomac. In this particular case, however, the term "superior" is a coined newspaper phrase applied to certain northern California counties as yet largely undeveloped but possessing wonderful potential resources. In closing, we wish to remark that if there is any one who does not believe that California is a "better place to live," let him add up his coal bills for last winter.--D-5.

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Editor's Note.--H.R.K. says he is willing to let the following item speak for him in reply to the above outburst from D-5.

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At Last - The Truth is Out! There is an automobile law in California compelling a Californian to blow his horn. You'd hardly believe it, would you?

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FOREST PRODUCTS LABORATORY

Book Paper from Southern Pine: Two thousand snowy white samples, wrapped temptingly in white tissue, are the results of recent pulp cooks, the odoriferous evidence of which was only too well recognized at the Main Building and parts of University Avenue.

These samples are made from southerm pine and gum, a carload of which was received at the Laboratory from the Seaboard Air Line Railway, which wanted the material made into pulp suitable for book paper.

The samples will be placed on exhibit and distributed at the Paper Industries Exposition in New York City by the railroad, which is seeking to develop the pulp and paper industry in its territory. Very little book paper is made in the South, but a good field for extension is opened by this process.

At present book paper is made in Pennsylvania and Maryland from aspen, and in the Northeastern States from spruce, hemlock, and balsam.

One million tons of book paper valued at over $200,000,000 are used annually in the United States for books and magazines.

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Wet Bark from Pulpwood as Fuel: The utilization of the wet bark removed from pulpwood prior to pulping constitutes one of the big problems of the paper industry. Almost half of all the wood used for pulp is barked by the wet drum process and this wet bark is at present largely waste.

For the past two years, the Laboratory, represented by Mr. John D. Rue, has been cooperating with the paper and pulp industry to determine whether there is any use for this waste. While there have been developed at the Laboratory some minor uses, such as the manufacture of coarse car-liner, wallboard, roofing felt, or the extraction of tannin in hemlock, the best use seems to be for fuel.

This method of disposing of the bark is found to be commercially practical, if the wet bark is pressed to a fifty per cent moisture content. If the bark from the 2,579,000 cords of northern conifers now consumed were dried in this way and used, the increase in heating value would represent the fuel value of 68,000 tons of coal worth $475,000. The heat obtained from burning the pressed bark would represent $545,000, making a total possible saving to the industry of $1,024,000, provided the product can be burned with the same heating value as coal.

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DISTRICT 1 - NORTHERN DISTRICT

The Forest Protection Week Plans of this District include the use of a newspaper cartoon strip prepared by J. B. Halm of the Office of Engineering. The strip is in five parts: the first a facsimile of a letter written by Joe to friend Bill informing him of the Presidential Proclamation, the three following dealing with the careless use of fire by the thoughtless tourist, the over-confident camper, and the unconscious fisherman; and the last showing the ruins of a home in the midst of a waste of blackened snags.

Arrangements have been made to have this cartoon printed by a publishing company in its regular "boiler plate" which it supplies to over one hundred weekly newspapers in Montana. In addition "mats" from which metal cuts can be made are to be supplied to all the large daily papers in the District which are equipped to handle them. A few of the papers not reached by the boiler plate service, and not able to run their own "slugs," are to be supplied directly with plates made from these mats.

The four pictures from the strip, together with two announcement slides telling briefly of the proclamation and giving credit to the theater manager for free service in running the set, will be shown in over 60 picture houses. This has entailed the preparation of over 350 slides, all of which work has been handled by the local PR photographic laboratory at a cost of less than 7 cents each for material.

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Business Is Looking Up: From some figures recently compiled for the District it appears that approximately 15,000 people used the Forests of the District in 1923 for sales, free use, grazing and special use purposes. This represents in the neighborhood of four per cent of all the people living in North Idaho and Western Montana.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

1923 Fire Record: Figures just compiled for 1923 show that June is the worst month for man-caused fires, while in July there are more lightning fires than in any other month. Of the man-caused fires last year, 7 per cent were in April, 34½% in May, 44% in June and 9% in July, the rest being spread over five other months. Nineteen per cent of the lightning fires occurred in June, 71 per cent in July, and 4 per cent in August. Three other months had lightning fires.

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Artist Rotation of Ten Years on the Carson: Ranger W. E. Murk of the Carson has resigned to accept a position as Assistant Manager of the Spanish and Indian Trading Company of Santa Fe. This work will give Murk, who is an artist, more time for his painting and a closer contact with people interested in his vocation. This resignation is a reminder that it is somewhat over ten years since Bert Phillips of the Taos art colony left the Carson to become famous as a painter of Indian subjects and New Mexico scenery. Apparently they are produced once in a decade in the northern part of the State.

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Loco Survey in D-3 This Spring: Dr. W. W. Eggleston, Assistant Botanist of the Bureau of Plant Industry, has informed the District Office that he will arrive in the Southwestern District this month to conduct a survey and study of the loco weed as a poisonous range plant. It had been planned to make this study a year ago, but on account of drouth conditions it was postponed. Dr. Eggleston expects to collect a large quantity of loco weeds for feeding experiments as well as many plant specimens. He will work over the southern part of the Coronado, in the vicinity of Mt. Graham on the Crook, and in the big Burros on the Gila.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Grazing Reconnaissance Results: On approximately 200,000 acres cover by extensive reconnaissance last season on the Weiser Forest, there were 1.82 forage acres for each ten surface acres. It is interesting to compare this figure with some others secured in the District. On the Oxford division of the Cache Forest, which was covered by extensive reconnaissance last year, this figure was 1.57. Out of the 158,000 acres covered on the Minidoka Forest the average figure was approximately 1.80. An area of 123,000 acres covered on the Clear Creek and Marysvale divisions of the Fillmore Forest, representing the best range on that Forest, averaged 1.40 forage acres for every ten surface acres. Last year as an experiment, forage acres were compiled on the Weiser Forest for both cattle and sheep separately, taking into consideration the difference in palatability and forage value for the two classes of stock. These figures showed a difference of only .72 of 1 per cent between the total number of forage acres available for sheep and the total number available for cattle on the same area. This is too small a difference to warrant separate estimates for each class of stock. Based upon information secured last year in regard to carrying capacity and forage acres available for each class of stock on the Weiser Forest, the conversion factor of cattle to sheep on that Forest is 1 to 2.7, a much more even ratio than is usually figured. The range where these estimates were made is a regular conifer, grass, and weed type.

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DISTRICT 5 - CALIFORNIA DISTRICT

Cents vs. Seedlings: A report on the high lead logging study undertaken by the California Forestry Committee has been prepared by Swift Berry under date of December 31, 1923. It is a summary of all of the material that has been collected to date, including figures and opinions contributed by operators. The new material offered covers a time study made on high lead setting on moderate uphill ground compared with a ground lead study made on similar ground and with the same type of donkey several years ago. Check observations of the time spent at the spar pole were made on two other areas. The high lead showed an advantage over the ground lead of from 15¢ to 25¢ per M foot.

As a whole, the showing made in favor of high lead methods is rather small. Mr. Berry's main conclusions concerning the advantages are as follows:

(1) There is a small saving in cable cost.
(2) Use of smaller engines is possible.
(3) There is a small advantage over ground lead on moderate uphill settings.
(4) Probable greater advantage on steeper and rougher ground.
(5) Little or no advantage, possibly a disadvantage, on downhill and sidehill logging.

(6) Simplified logging layout. Popular with workmen on account of less effort required.
(7) Has little or no advantage at pole over modified lead.

Mr. Berry recommends the use of the fixed boom lead where conditions for its use are favorable. He also mentions high line speed as a cause of destruction and as a doubtful operating advantage.

The California Forestry Committee will prepare a synopsis of the report for publication in the trade journals. It has been suggested and the committee has under consideration the advisability of extending the study to cover rough uphill logging where the high lead should show its maximum advantage.--J.H.P.

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Recreational Development on the Santa Barbara: The Los Angeles Playground Commission has applied for a permit for 80 acres at Oak Flats on the Santa Barbara for a municipal recreation camp for the colored citizens of Los Angeles. The city is prepared to spend $5,000 at once in developing the area and will add to it as the camp grows.

Oak Flats is a very desirable site for a camp of this kind and no doubt there will be a demand for summer homes adjacent to the camp.

The recreation business is increasing so rapidly on the Santa Barbara that the desirable areas here will soon be taken up. Jordan has issued about 60 summer home permits since January first.--L.A.B.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Close: In comparing the cut with the cruise on 175 acres of the Sauk River Lumber Company sale area on the Sauk River, Snoqualmie Forest, it was found that there was a difference of less than 2 per cent between the cruise and the cut. The figures are as follows:

	Cruise		Cut	
Douglas fir	6,596,000	ft. B.M.	6,598,250	ft. B.M.
Cedar	1,251,000	" " "	1,362,640	" " "
Hemlock	1,009,000	" " "	792,880	" " "
White pine	36,000	" " "	46,950	" " "
	8,892,000	" " "	8,800,720	" " "

Estimate 91,300 ft. B. M., or slightly over 1 per cent in excess of cut. The tract was cruised by a timber survey party under the direction of Woodbridge Metcalf during the season of 1912. The stand per acre was something over 50 M. ft. B. M.--J.R.B.

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Ranger Ewing of the Tremont - He Takes All Comers: "I hereby apply for the positions of Deputy Superintendent of Forestry, Hawaiian Islands, and State Forester of Vermont, including teaching.

"I do not think we would have any trouble spending the $7,000. My work plan is to handle the Hawaiian job in the winter and I could easily teach the Vermont folk all I know during the summer.

Volcanoes make me nervous but an occasional trip to Waikiki(?) Beach ought to keep my mind off of this danger.

Please start the salaries at once!"

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Road Signs: There have been shipped out to the Forests 60 metal road signs. These are 30" in diameter, of heavy metal, enameled, with the name of the road, length, name of county, etc., stating that "this section of the ------------- Highway was constructed cooperatively by ----------------- County, State of ---------------, Forest Service, and Bureau of Public Roads." There are two signs for each section, one for each end of the road. Creosoted posts and cross-arms will be sent out with each sign.

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DISTRICT 7 - EASTERN DISTRICT

New Town Forest May Be Established: During a recent town meeting at Gorham, N. H., it was decided to appoint a committee to determine the advisability of the town of Gorham taking steps toward acquiring land for a town forest. The committee consists of five very active and enthusiastic supporters of forestry, and they will undoubtedly recommend to the next town meeting that a town forest is desirable and that one should be established. It is certainly very encouraging to have the local towns in New Hampshire become interested in owning their own forests.

Cold Springs Ranger Station Destroyed: Fire resulting probably from an overheated flue on March 18 destroyed the Cold Springs Ranger Station on the Arkansas National Forest. The fire was discovered, after it had gained considerable headway, by Mrs. Younger who with her two sisters made unavailing efforts to check it. All of the office furniture, fixtures, equipment, and records, and all of the ranger's household goods were destroyed. The Cold Springs dwelling was probably better than average in value and adequacy and the loss is indeed a serious one to both the Service and the ranger.

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Service Bulletin
U. S. FOREST SERVICE
(Contents Confidential)

Vol. VIII, No. 17. Washington, D. C. April 28, 1924.

A NEW KIND OF ELAPSED TIME AND A POSSIBLE USE FOR IT

By H. T. Gisborne,
Priest River Forest Experiment Station

The reports on lightning storms and fires obtained in D-1 during the 1923 fire season reveal a new period of elapsed time which occurs on nearly all lightning fires and which may be usable. This period consists of the time between the first sighting of a thunderstorm by a lookout and the discovery by the same man of each fire caused by that storm. The following table shows the averages obtained from the reports of the past season:

(Elapsed time between first sighting of the storm and the discovery of each fire caused by that storm. Basis, 327 reports by about 90 men. Percentages are of the total number of lightning fires discovered.)

Less than 1 hour	Over 1 hour	Over 6 hours	Over 12 hours	Over 18 hours
3%	97%	65%	41%	15%

It would appear that a warning from the lookout stating that a storm was approaching would have served as a one-hour or better warning for 97 per cent of the fires, and a 6-hour or better warning for 65 per cent of them.

The difficulty in using such warnings consists of the fact that every lightning storm does not start fires. If we had used this method during 1923 we would have prepared for lightning fires an average of 3 times when no fires resulted, for the once when fires did occur. There appears to be a key to this difficulty, however, Our 1923 records show that the average storm which started fires had 48 per cent of its lightning directed toward the ground, whereas the average nondangerous storm had only 25 per cent of its lightning directed to the ground, the other 75 per cent being confined to the clouds. In 1922 the average fire-starting storm had 51 per cent of its lightning striking, while the average nondangerous storm had 35 per cent coming down. The records for these two years seem to agree on this fact rather well. Hence warnings should be broadcast by the lookouts only for those storms which have at least one-half or more of their lightning striking the earth. This would undoubtedly result in some failures to prepare, but it should also decrease the percentage of false alarms to a better basis. If it is better to be prepared 4 times and only use that preparedness once, then all storms should be reported immediately by the lookout.

As thunder can frequently be heard for distances of well over 30 or 40 miles, all men not fully prepared to depart at once for fires might return immediately for their outfits. All others might get on the phone and obtain information on the character and movement of the storm and stay on the phone ready to receive fire reports.

An elapsed time of over 6 hours occurred before discovery of 65 per cent of our lightning fires in Idaho last season. The warnings are there ready to be used. Can we use them?

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SOME THOUGHTS ON TECHNICAL AND SCIENTIFIC COGNOMENS

By Lee P. Brown, Crater

Reference is made to Mr. Headley's article, "Timber Farmers or Operation Mechanics," in SERVICE BULLETIN dated March 3.

This question came up for discussion at a meeting of Forest Assistants a year ago, when it developed that very little of the so-called technical man's time was being spent on technical work. As a matter of fact the name "technical" or "scientific" is a misnomer and the sooner it is forgotten the better it will be for the so-called technical man, because he does not exist, or if he does he should not.

At the meeting it was generally believed that the first problem of the Forest Service when it was created was one of organization and administration of the National Forests. What the Forest Service needed and what it developed were men of organizing and administrative ability. Its prime need will always be men of this caliber.

The first problems of organization and administration have passed the turbulent stage of experimentation. Ways and means have been proven, so that our administration has now settled down to the slow process of evolution and adaptation. Consequently, the more dynamic individuals erupt occasionally in an effort to find new problems to conquer. Such efforts are good in that they act as a purgative and prevent the Service from lapsing into a mummified form of procedure or of developing too much satisfaction with present knowledge.

No one denies that we are not sadly lacking in basic data to prove our methods of forest management, of cutting, planting, and grazing.' But it is not reasonable to expect that an organization which has handled the Forests for only a small portion of their first rotation should know it all. Much of our knowledge is empirical, which does not mean that it is wrong but that we lack the great mass of proven facts which are necessary before this knowledge can be finally accepted. It is the feeling of many men in the Service that our next big problem will be the simple and careful recording and collection of data necessary to the proof and development of scientific forest management. Much of these data cannot be collected except as we pass through the various periods of the forest rotation. This work is no less important than that of administration, in fact, it is a recognized part of administration, for our forest management is even now based on such data as we have collected.

Forest management is a business, and like any big business which deals in resources it has its administrative and research problems. Similar to a business, it must have its research laboratories and workers as well as its operation experts. Even the dirt farmer spends 90 per cent of his time in the modus operandi and but 10 per cent in scientific effort. Personally, I liken the Forest Service to a regiment, wherein the Washington office forms the regimental head and the district offices the battalion heads. The clerks and supply depots form the headquarters company and the Branch of Research and Experiment Stations form the color guard and regimental band. Perhaps FR will claim the latter distinction, but anyway the rest of us form the rank and file of the regiment - we follow the colors and keep time to the music.

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GRAZING BENEFICIAL TO YELLOW PINE PLANTATION

By Fred R. Johnson, D-2

A favorite subject for SERVICE BULLETIN writers during the past year has been criticism of various phases of grazing on the National Forests, including the collection of grazing fees, the settlement of trespass cases and injury to reproduction. The grazing men have kept their peace and predicted that in the long run regulated grazing on the National Forests would come out with flying colors. I believe in giving the devil his due and here is a case where credit for greater survival and growth is apparently due to grazing.

In 1913 two plots - one fenced and the other in the open range - were each planted with 400 yellow pine transplants. The plots are located near the Transfer Ranger Station in the yellow pine-scrub oak type on the Uncompahgre Forest. The soil is of sandstone origin and the plots are located on a nearly level mesa. The mature yellow pine was cut about 30 years ago and very little reproduction has come in during that time - not more than ten saplings or young black jacks to the acre and no seedlings.

This area is grazed lightly by sheep in passing to the higher range in the spring and again in the fall, as the bands are driven to the valleys below. It is also grazed by cattle an average of about thirty days a season. From this it is evident that the grazing is not heavy, and this is apparent from the fact that no injury was noted to the planted trees on the open range. The unprotected plot is immediately adjacent to the fenced plot and the drift of the stock around the fence has not caused any injury to the trees.

On August 23, 1923, the plots were examined by Supervisor H. H. French, Forest Assistant Fenger, Ranger Keep and the writer. The results follow:

	Protected plot	Unprotected plot
Number living trees	189	225
Per cent living	47.25	56.50
Average height	19.27 inches	23.42 inches
Maximum height	59.50 "	73.00 "

From the above it will be seen that the survival on the open range was 9.25 per cent greater and the height growth was 21.5 per cent greater than in the protected plot. The oak and sagebrush cover on both plots is about the same density, but grazing has undoubtedly reduced the competition of the grass and flowering plants which accounts for the better results on the open range. The soil and other conditions are identical, and even the most ardent silviculturist must admit that grazing in this instance has been beneficial to the planted trees.

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MANY RADIO MESSAGES ON FOREST PROTECTION WEEK

Messages spreading the gospel of forest fire prevention were broadcast during Forest Protection Week from at least 29 radio stations, according to information in the Washington office. These messages were prepared by Secretary Wallace, Gifford Pinchot, and Col. Greeley. Who knows of other radio messages?

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WASHINGTON NOTES

H. A. Smith Resigns from Common Names Committee: Assistant Forester Herbert A. Smith has retired from the Committee on Common Names of Trees. With the approval of the Forester Mr. Smith's place will be filled by M. C. Merrill of the PR Branch. Mr. Smith has served on the committee since its inception, along with George B. Sudworth. The committee now consists of Mr. Sudworth, Mr. Shepard, and Mr. Merrill.

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First Prize in Boy Scout Parade:--John Cuno's troop of Boy Scouts was awarded first prize for the best float in the Boy Scout parade that pried the lid off of Forest Protection Week in Washington. This was to be expected since C. G. Smith of D-7 and Mrs. Haupt of Research, aided and abetted by three kids belonging to Service men, assisted Cuno. "The Careless Tourist" was the name of the float, and take it from all of us, Mr. Smith and Mrs. Haupt looked and acted their parts splendidly. Mr. Shepard loaned his flivver for the stunt - but this is no reflection on Shepard's bus. Flivvers are flivvers, you know.

The American Forestry Association donated eleven prizes to the Boy Scout troops. The prize won by Cuno's troop was a two-tube radio set.

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FOREST PRODUCTS LABORATORY

Ford a Leader in Efficient Wood Utilization: A saving of 35 to 40 per cent in the cutting of fine hardwood for auto body parts is claimed by the Ford Motor Company. In this new system planks with the bark left on are cut in parallel planes varying according to the shape of the log. The planks are then taken to the "layout tables" where patterns for various parts are marked out until the entire plank up to the bark is covered. Limbs and tops under four inches are brought to the mills and stumps are cut to six inches.

The process of seasoning is also said to be simplified by this method, and there is less loss from warping and end checking. Under this method of cutting dimension stock, the Ford factory gets 368 board feet as against 127 board feet under the former wasteful system. Seemingly Mr. Ford is the first large timber owner to realize that efficient utilization is a major factor in forestry practice.

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Cable from England About Courses: A cablegram from England requesting the dates of our next courses shows the widespread interest in this Laboratory activity, just as telegrams from United States residents for reservations illustrate the keen desire to take the course that is being built up.

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FOREST EXPERIMENT STATION

Fire in Loblolly Pine, Urania, La.: A very complete series of plots in stands representing various ages and, in the youngest age class, densities of stocking were laid out at Urania, partly in the leased Greeley Pasture and partly in the elk pasture near Urania. Five one-fifth acre plots are in a rather irregular stand of seedlings and saplings from 1 to 25 feet tall. They are in an old cutting, where grass and underbrush are abundant. One plot will be burned this winter and one at each successive season, year after year; the fifth plot will not be burned at all. Because a large enough area of mixed saplings and small poles (the next age class) could not be found in one stand, two old-field stands of the same age but on slightly different sites were selected for the establishment of three plots each. A check plot, a spring burn, and a fall burn are in one stand, and a summer burn, a winter burn, and again a check plot, in the other. A third group of five plots in still older timber running from four to twelve inches in diameter was established on an old field. In all of these plots the trees were tagged and described, but additional data have been thought of which should be secured. In stands with trees large enough to have appreciable volume this figure will be worked out for each plot as soon as volume tables from the pine growth study are available.

It is expected that spring and summer fires will kill many trees in all three age classes and that even the fall and winter fires will kill at least a few of the youngest seedlings. In the youngest age class the first burning will be done this winter. Good progress, however, was made in burning the other plots. In the sapling and small pole stand the spring fire weakened enough trees to attract bark beetles (Ips sp.), which attacked about 25 trees successfully, and this number had to be cut and thoroughly charred. The summer fire did no such damage, the litter being damp and conditions generally less favorable to severe injury. In the oldest stand neither spring nor summer fire caused serious outward injury. The summer fire consumed only about half of the litter, which was damp, and the Southern Forest Experiment Station judged that several days' drought would make another fire in the same plot entirely possible. Curiously enough - for autumn is generally the driest season in Louisiana - wet weather prevented any fall burning.--R.D.F.

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DISTRICT 1 - NORTHERN DISTRICT

Trespass Notes: The year 1923 produced in District One 152 trespass cases. These were segregated as follows: property 9, fire 49, occupancy 2, game 37, grazing 45, timber 8, and assault on a Forest officer 1.

Of the entire number 83 were handled as criminal cases under the property, fire and game laws, and 75 convictions were secured. Four cases were dismissed on acquittal of the defendants for want of sufficient evidence to support a verdict of guilty. Five cases were dismissed without trial for a similar reason. Fines and costs amounting to $1,968 were levied on, and paid by, the defendants. Two offenders served terms in county jails for violation of the game laws of Montana, and the trapping equipment and guns of 3 game law violators were confiscated.

Civil cases produced a revenue of $16,337.37. Most of the civil cases were settled without institution of legal proceedings. Of the 69 cases, suit was instituted in 9 instances only. Judgment in one case was entered for the defendant and 2 were dismissed for want of sufficient evidence. In one instance the case remained under investigation so long that when the Government was ready to proceed to trial the chief witnesses in the case could not be located. Approximately 50 per cent of the receipts were for damages for timber trespass.

There are now pending final action 3 timber, 7 fire, and 3 occupancy trespass cases which involve approximately $970,275. One of these is a timber trespass where the damages are estimated to be $956,000.

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To Enforce Sanitation Laws: The matter of enforcing the state sanitation laws on private land in and adjacent to National Forest areas was recently taken up with the State Board of Public Health. A letter from Dr. Cogswell in reply offered to cooperate with the Forest Service and suggested the appointment of certain Forest officers as Deputy State Health Officers. In the past, because of the presence of intermingled private lands within the Forest, it has been difficult to enforce the State sanitation laws. However, in the arrangement proposed, this difficulty will be overcome.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Livestock and Range Conditions: Prolonged rainfall in the fall of 1923 and its effect upon forage is being seen at this time in the general condition of livestock, both cattle and sheep. The forage has not had the quality nor strength that it usually has, and in spite of supplemental feeding of concentrates, etc., the cattle and sheep are coming out of the winter, in the plains sections, in rather poor condition. As an illustration, one party who saved his range in the summer for winter use and bought concentrates (corn and cottonseed cake) has, out of about 4,500 head of sheep, 2,800 under special attention, or in what he calls his "weak herd." It will be a month yet until grass and a great many stock will be below their normal thrift when the green grass comes.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Gila Permittees Endorse New Grazing Rates: An important meeting was recently held in the office of the Supervisor at Silver City for the purpose of considering the results of range appraisal and the new system of computing National Forest grazing fees. The Gila Advisory Board of the New Mexico Cattle and Horse Growers Association, the Frisco Association, the Fiero Association and a few other cattlemen made up the deliberating body. The Forest Service was represented by Messrs. Kerr and Hussey of the District office and Winn, Putsch, Bosworth and Nabours of the Gila. After full and free discussion of every factor pertaining to the whole subject this resolution was authorized: "The members of the Advisory Board of the Gila National Forest having reviewed the results of the grazing appraisal find that they approve of the plan adopted of determining grazing fees and approve also, in general, of fees arrived at with the understanding that due consideration will be given to such individual cases as may require any special adjustment."

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Want Lookout Job on Petrified Forest: A couple of ambitious goung men, recently arrived from the East but not stopping in Winslow, says the Coconino News Bulletin, applied at this office for a summer job as fire guard or lookout. We had to inform them that all our places were tentatively filled. They then inquired regarding the chances of obtaining a similar position in the petrified forest, which they had heard was located in this part of the country. We referred them to the forest headquarters at Holbrook.

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DISTRICT 5 - CALIFORNIA DISTRICT

Big Stanislaus Timber Sale: Twenty-four million feet of National Forest stumpage is being advertised for sale on the application of the Yosemite Lumber Company, Stanislaus Forest, the timber to be cut during the next two seasons. The following stumpage prices have been approved:

Yellow pine	$3.00	per M.
Sugar pine	4.25	" "
Incense cedar, white fir and Douglas fir.	1.00	" "
Average stumpage price	3.02	" "

The Yosemite Lumber Company for some years has been logging in the northern part of the Sierra National Forest. Their operations there have been concluded and they have moved into the southern part of the Stanislaus Forest, where they have a large holding. The opening up of their Stanislaus tract involved the construction of two inclines, one 8,000 feet long and the other 1,500 feet long, separated from each other by about $1\frac{1}{2}$ miles of logging road.--T.D.W.

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Make This Your Pledge: I am at all times an individual personal representative of and for the United States Forest Service, regardless of my office or duties, and it is for me to see that the policy of this Service - that of rendering the highest service to the greatest number - is carried on.--H.

DISTRICT 6 - NORTH PACIFIC DISTRICT

Ranger Case of the Siskiyou Reports a Skeery Story: Jack Stone, a man of renowned veracity who worked on the District last year, was coming down the South Fork of Smith River and had just crossed the Hurdy Gurdy when he heard something in the brush; he turned just in time to see a cougar making a spring at him. He side-stepped and the cougar hit the ground and jumped back about eight feet, then prepared to make another jump. Now Jack only had a pocket knife so he stopped down to get a rock and the cougar made another spring and Jack was not as fortunate this time. The cougar caught one of his hands and cut a gash to the bone from his wrist to the end of his third finger.

When Jack came up, he came with a rock and said rock connected with the cougar's head which stopped him for a moment. Jack then took the Hurdy Gurdy up to his neck into the cold water. The cougar did not have the nerve to tackle it so Jack went back to the Alma place to get two dogs and two men. They got Mr. Cougar but not without a fight as one of the dogs was put in the hospital for some time. The cat measured 7 ft. 6 in. and was very poor.--G.C.C.

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Going Up: The Chelan is celebrating for the first time in its history a bid for timber at fifty cents per M above the advertised minimum. The Cooper Gulch Area was advertised for $2.50 for yellow pine and a bid was received for $3.00. The flurry is attributed either to Asher Ireland's coaching or the sending out of bid forms from this office to every available prospect in the vicinity.--L.A.I.

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In Memoriam: The following mountains or peaks on the Snoqualmie have been renamed in honor of former Forest officers:

Mount Bullen: T. 31 N., R. 9 E., named in memory of Chauncey H. Bullen, who was killed while scaling logs near Darrington, Wash.

Mount Fernow: T. 26 N., R. 12 E., named in memory of Dr. Fernow, father of American Forestry.

Mount Price: T. 23 N., R. 11 E., named in memory of Overton W. Price, one of the pioneers in the U. S. Forest Service.
--W.G.W.

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DISTRICT 7 - EASTERN DISTRICT

Boy Scout Camp on the Wichita: Seventy Boy Scouts put in a day last week improving the road to Boulder Camp on the Wichita. This camp which is destined to be the most extensive recreational development within the Wichita and the Mecca of Oklahoma scoutdom is about three miles off the main automobile highway, and a lack of money for improvement of this 3-mile strip was no real obstacle to those most vitally interested in getting it in shape for the coming season. Lawton business men furnished transportation for the boys and a lunch was brought out to them at noon.

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Make Your Room Reservations Now!. A new hotel is to be built on land adjoining the Pisgah in the Bent Creek District. The project will call for an outlay of three quarters of a million or more. It is proposed to establish a golf course, polo field, and other attractions, and - mark this! - charge reasonable rates of $3.50 to $5 per day. The promoters visited the Pisgah office to seek aid in trail extension to their property for benefit of their horseback riders.

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Some Good Encouragement: An interesting April development in connection with the National Parks agitation which has the southern Appalachian region generally "all het up" was the formation at Knoxville, Tennessee, of the Roosevelt National Forest Association. This association seeking the establishment of a great national recreation area in the Smokies declares that "it is not going to ask Congress for any new laws, but merely ask it to give the forestry department an adequate appropriation to complete the work which was started more than twenty years ago under the Weeks Law and which cannot be consummated without adequate appropriation by Congress." An encouraging note in a chorus which has made PR life in D-7 interesting for some time past.

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Honored by Visit from Mrs. Fernow: The Pisgah office was highly honored by a call from Mrs. B. E. Fernow a short time ago. Mrs. Fernow was visiting in Asheville and felt she must see some of the men of the Forest Service while she was in town. She talked most interestingly of Dr. Fernow's early life and work in the United States.

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

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SHALL IT BE RECEIPTS OR NET RECEIPTS?

By Leslie T. Mahurin, Pike

Mr. Headley raised the question in Service Bulletin of April 14 as to whether we should revise our attitude regarding receipts, the idea suggested being that if we increase receipts and get on a "self-supporting" basis, it would be a means of getting appropriations.

Somehow, to me, Mr. Headley's suggestion does not seem unfamiliar. I feel that ever since I have been in the Service we have been chasing this fugitive thing, "self-support." As the term "self-supporting" seems to be interpreted in the Forest Service, it means that receipts shall equal or exceed expenditures. What has been the result of the chase? Receipts have increased but so have expenditures. In fact, expenditures seem to be running a winning race.

May I offer the suggestion that the Forest Service cannot and should not get on a "self-supporting" basis in the very near future according to the above meaning of the term? Nearly every National Forest needs capital for development. Should we continue to promote or accept a meaning for the term "self-supporting" that is economically unsound, no matter what the immediate benefits might be?

I should like to suggest that we should get ourselves and everyone else out of the idea that by "self-supporting" we mean our expenditures do not exceed our receipts. I suggest that we adopt as the meaning of "self-supporting" the condition which exists when our receipts exceed the cost of getting receipts by a sufficient amount to represent a proper return on the capital invested in revenue-producing activities. We are striving to do it now, but do not get the information necessary to determine whether we are doing it. A comparison of all expenditures with receipts is no just basis for comparison in the Forest Service any more than it is in any other business. The Forester, in his report covering the fiscal year 1923, intimates as much. Although his report shows expenditures to be over a million dollars more than receipts, he feels obliged to explain that capital expenditures are a proper deduction from the total expenditures, but for lack of information he is unable to tell the world how much to deduct.

It seems more logical to me to ask for increased appropriations on a showing that the capital previously expended has resulted in or will result in a fair return on the investment. It automatically governs or controls capital investment. Isn't that the test of wise expenditure of funds in business?

A calulation which has been made for the Pike for the fiscal year 1922 seems to indicate that even the Pike, which has a comparatively light revenue-producing business, may be "self-supporting" in the sense suggested. The Service, as a whole, should make an even better showing.

Probably few will deny that it would be very desirable to have the facts about the relation of our receipts, cost of getting receipts, and the capital invested, but few are willing to say offhand that it is practicable to get it. Inevitably there flashes in the mind such "bugbears" as, how to determine capital invested, our manner of securing funds, the disposition that is made of receipts, services that are rendered without charge for us and by us, the deterioration, depletion, increment, and fire damage of the forest, depreciation of improvements, and at least a hundred and one other trifles, including the compound interest theory - all insurmountable difficulties - perhaps.

But has the problem ever really been thoroughly and sympathetically studied? A corporation like U. S. Steel has all these problems and perhaps more, yet it must cope with them in order to live. We do not need to solve them, apparently, in order to live, but I gather that it has been from the first, is now and ever will be, in the heart of a forester to practice economic forestry. So, is it not important that the information be secured that makes it possible for him to determine that - whether the thousand feet of timber he sells return him a net profit, or at least has not cost him any more to grow and sell than he gets for it?

The annual cost statement for 1923 shows that timber sold on the Pike cost $1.94 per M ft. - a little profit indicated. But this does not include any of the costs suggested in the above factors, not even fire prevention costs. A calculation of the effect of these factors for the fiscal year 1922 indicates that we were selling timber on the Pike at about one-half what it cost us, the loss being made up from grazing and special use receipts, so that approximately a 2% return on the calculated cash capital invested was indicated. Of course you are entirely at liberty to recall the old saying, "Figures don't lie, but liars will figure." But, nevertheless, the calculation suggested that the Forest Service as a whole and even perhaps the Pike, is really "self-supporting" as that term should be understood.

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SOME LIGHT-READING SUGGESTIONS

By M. C. Merrill, Washington

When your manuscripts have all been sent in for execution, your reports all started on the rocky road to approval, your correspondence cleaned up spick and span, your experimental data salted down in notes, your laboratory given its annual bath, your mensuration agonies all over until the trees put on a new layer of fatty increment, and your restless soul yearns for more worlds and woods to conquer, here are some light-reading suggestions.

You can blame R. E. Marsh of District 3 for them, for on a recent big-game hunting expedition he lassoed these native productions of the Southwest and mow exhibits them in the same proud spirit as does a father with his triplets.

Here is the way he speaks of this trio:

"Ranger District Number Five" - H. S. Moles. Published by Spencerian Press, Boston, Mass.

"Rimrock" - T. C. Hoyt. Published by the Four Seas Company, Boston, Mass.

"Lem Allen" - Pinkney Lawson. Published by Boren and Leveright, 61 West 48th St., New York City.

"Mr. Moles was in the Agricultural Extension Service with the New Mexico State Agricultural College, traveled around the State a good deal, and picked up certain tales of the early Forest Service days which are incorporated in his book.

"The other two books are novels, scenes for which are laid in the Southwest.

"Rimrock" is said by those who have read it to be worth while. Mr. Hoyt was until recently Supervisor of the Sitgreaves. The book by Lawson is new, and I have not seen it, but have heard it endorsed."

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RANGERS QUESTION LONG ESTABLISHED POLICY

By E. W. Tinker, D-2

At the four ranger meetings held in the Rocky Mountain District this winter, the policy of reserving from sale, making only a light cut, or removing only dead and diseased trees along scenic roads and on recreation grounds came up for serious question. There was a strong sentiment among the rangers to the effect that as a general thing we have nothing to be ashamed of on our cutting areas and under the regular marking practices usually the scenic and recreational values are not detracted from for any length of time. The reservation of a strip of timber around the more scenic lakes, except for dead and diseased trees, appeared to meet with favor, but along roads the concensus of opinion was that generally this is the place to advertise the practice of forestry and educate the public in our work.

No sweeping change was endorsed, as it was the feeling that there are cases where we should modify cutting practices, but there was no uncertainty in the feeling that we should start in on an educational campaign and that forestry and recreational values can be correlated, and further that we are going too far in covering up our forestry practice.

It was the opinion of many of the rangers that cut-over areas generally have as high, if not a higher, recreational value than old mature stands of a defective character, and that an area on which forestry is being practiced will appeal to the senses of the average tourist, leaving him with a favorable impression and something to talk about that is really worth while.

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A 35-YEAR OLD PLANTED PINE FOREST IN THE SOUTH

By W. R. Mattoon, Washington

Before the peak of lumbering had been reached in the Lake States and two decades prior to the summit of Southern lumbering, Seton Grantland in 1892 planted some 7,000 shortleaf pine seedlings (Pinus echinata) on his farm near Griffin in middle Georgia. The result is a complete forest, probably the oldest man-made forest of any southern pine in this country.

The little trees were about a foot high (2 years old) and were set about 8 by 8 feet apart in rows following the contours around the gentle slopes of a shallow ravine, or gully, in an old cotton field. They are now 35 years old and from 45 to 60 feet in height and 9 to 12 inches in diameter. The area is about 10 acres. The stand will likely yield about 16,000 board feet of lumber per acre.

The canopy is strikingly perfect, and a complete blanket of pine straw and litter protects the roots and conserves the moisture, resulting in natural conditions and vigorous growth. The results of fire protection are thus strikingly apparent.

It is of interest to note that Seton Grantland, who must be regarded as a pioneer of forestry in the South, sprang from well-educated Virginians who migrated to Georgia. He became a well-to-do merchant and planter, and is remembered locally as a forward-looking man of unusually pleasing personality. He lived to see the forest he had planted grow to logging size, and accomplish its purpose in putting a piece of worn-out land to productiveness and also afford a screen to a growing cemetery on the hill opposite his estate.

The forest is owned by a daughter who cherishes it highly and is taking good care of it with a view to turning it over a little later to the town as a public forest park. It was the writer's good luck to visit the forest by chance while out with the Agricultural Agent of the Central Railway of Georgia. It was discovered that the stand had been established artificially, after which its history was easily learned upon a little search.

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WASHINGTON NOTES

Comparative Timber Sale Unit Costs F. Y. '22 and '23: The costs of timber-sale administration per M feet on the two Forests in each District on which these costs were lowest in the fiscal years 1922 and 1923, with the exception of District 8, for which the cost on only one of the two Forests in the District is given, are shown in the following table. The rate stated includes direct Forest, indirect Forest, District office, and Ogden Supply Depot costs.

Only six Forests which were in the select group in 1922 were able to repeat in 1923. It will be seen that all of the Districts except Districts 4 and 8 show decreased costs in 1923 as compared with 1922, and that the cost for the entire Service decreased from 68 cents in 1922 to 52.72 in 1923.

The Minnesota Forest has been omitted in both 1922 and 1923 because the cost per M is so low that it is evident that the timber was cut under some form of cooperating agreement. The Alabama Forest has been omitted from the 1923 figures because of the small amount of timber cut.--H.W.

1922

District	Forest	Total cut M ft.	Rate per M	Rate per M for entire district
1	Blackfeet	783	.4136	.9475
	Kootenai	17,274	.5599	
2	San Juan	1,583	.5474	1.1258
	Washakie	16,010	.7254	
3	Carson	15,296	.4818	.9549
	Tusayan	15,833	.5598	
4	Toiyabe	932	.3984	1.3136
	Wyoming	14,794	.5668	
5	Lassen	21,753	.2832	.4904
	Stanislaus	29,166	.3239	
6	Columbia	17,216	.1199	.2769
	Mt. Baker	20,589	.1329	
7	Unaka	4,152	.5810	1.3356
	Pisgah	6,724	.6738	
8	Tongass	14,531	.3306	.4766
Rate per M for Forest Service				.68

1923

District	Forest	Total cut M ft.	Rate per M	Rate per M for entire distric
1	St. Joe	6,309	$.4398	$.9367
	Kootenai	13,790	.4754	
2	Montezuma	1,542	.4991	.9536
	Superior	4,633	.5519	
3	Tusayan	18,860	.4360	.7340
	Coconino	28,126	.5925	
4	Kaibab	365	.2162	1.5078
	Toiyabe	860	.5393	
5	Lassen	76,722	.1636	.3135
	Shasta	41,101	.1695	
6	Mt. Hood	32,591	.1104	.2446
	Siskiyou	25,916	.1610	
7	Pisgah	8,004	.4013	.9873
	Arkansas	6,930	.6080	
8	Tongass	27,262	.4086	.5037
Rate per M for Forest Service				.5272

FOREST PRODUCTS LABORATORY

Is Utilization a Part of Forestry? When a forester, who is a writer - that' his present job for a big magazine - and who once taught utilization, only recently has acquired a fair idea of what utilization means in a national forest policy, it is easy to see that there is much to be done before the public gets the production-protection-utilization theory. Here is his confession from a letter to the Director. Note, too, that even yet he thinks we are overenthusiastic.

"I've read your recent Journal statement with profit and interest. Considering that I used to teach 'Utilization' and that the magnitude and urgency of the proposition never soaked into me before - not even after having heard you in person on the subject, maybe you have discovered other alleged foresters to be equally hard to reach. Certainly the prevailing accent has always been on production, and hypothetical importations have seemed more practicable than creosoting and the like. . . You are up against it to dramatize your end of it. Devastation, etc., is easy.

"Of course, I will discount you here and there for probable overemphasis and specialist's prejudice in favor of his specialty, but plenty is left. To my mind, the main question now (as respects your end of it all), is how to sell the idea. The theory of it is plain enough when it is plain at all, but to derive a change in habit is something else and the practical cuss is the last man in the world to see the need and chance for doing something of this sort."

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Leopold Appointed Assistant Director of the Laboratory: Aldo Leopold, now Assistant District Forester of District 3, has been appointed by the Forester as Assistant Director of the Forest Products Laboratory. He will probably assume his new duties on July 1.

In commenting upon the appointment, the Forester said: "Leopold has behind him a brilliant record in National Forest administration. His whole career in the Forest Service has been marked by the kind of constructive effort which is so necessary in the development of a research organization such as the Laboratory. Although assigned to administrative duties, Leopold has, purely as a side issue, done a very considerable amount of research on his own initiative on the erosion question, an important question affecting the development of the National Forests in the Southwest.

"He has also made notable contributions to game questions in the Southwest, some of which also have been based on individual research. He will, therefore, come to the Laboratory with a broad administrative experience and a corresponding knowledge of general forestry developments. He will come also with a background of considerable individual research and of a very sympathetic interest in research and research men. I feel sure he will make a welcome and very helpful addition to the Laboratory organization."

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FOREST EXPERIMENT STATIONS

Age Counts of Punky Wood: If you want to know the age of an ancient stump or twig, don't let a little dry rot stand in your way. Just squirt in some 3-in-1 and count ahead. The oil makes it possible to cut a good smoth surface, and differences in penetration cause the growth rings to stand out well. This has been tried with white oak. Presumably other woods and other oils would give similarly satisfactory results.--F.W.H.

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DISTRICT 1 - NORTHERN DISTRICT

Flathead in the Limelight: Recently the Kalispell Chamber of Commerce commenced a publicity campaign to interest eastern paper and pulp companies in the possibilities for raw material in the Flathead Basin. It has asked the Great Northern Railroad Company to assist in advertising by sending a special representative directly to the manufacturers, particularly in the North Atlantic States, to invite a personal examination of this Flathead pulp chance. The Forest Service has been asked to cooperate to the extent of permitting the use of its prospectus and estimates of this chance in connection with the circular letter that will be sent to paper and pulp companies in the country.

The Kalispell Chamber of Commerce feels this is a favorable time to extensively advertise the possibilities of the Flathead Basin, since the exhaustion of pulp supplies in many regions of the East will force the industry to turn th the West in the near future in spite of the extra burden of freight rates to the consuming centers.

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Meeting of Technical Assistants and Lumbermen: From February 27 to March 1 a meeting of the technically trained foresters of District 1 was held in Missoula. This included Forest Assistants, Forest Examiners, technically trained Deputy Forest Supervisors, three technical Supervisors, and the lumbermen and logging engineers.

The bulk of the program centered around the revision of the marking rules for the four types in the District of most commercial importance, namely, white pine, yellow pine, larch - Douglas fir, and lodgepole pine. Proposed revisions were offered, and the reasons therefor from the management and silvicultural standpoints were thoroughly discussed. Besides marking rules, some questions of utilization in connection with timber sales came before the meeting. Other subjects discussed were determination of annual cut for management plans, yield tables, and timber surveys. Twenty-one were in attendance from outside of the District Office.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Rabies Outbreak: An outbreak of rabies was discovered recently in the lower San Luis Valley. Six counties of the valley had a meeting and organized to combat it in cooperation with the Biological Survey. Each county represented pledged $500 in cooperation, making a total of $3,000 which will be supplemented by State and Biological Survey predatory animal funds. The plan will be to put two hunters in each of the six counties represented by the valley, muzzle all dogs and take every precaution that will be necessary to wipe out infected animals.

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A Ranger Training Camp will be conducted again this year on the same plan as that followed last spring. Reports from Supervisors indicate that the men who took this training last year were just about a year ahead of untrained men. Peter Keplinger, of the District office, will be in charge, assisted by Ranger Stell of the Pike Forest. The training work will be done on the Woodland Park district of the Pike, with headquarters at the Monument Nursery. Ten men will take this training.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Son of First Commissioner of Forestry Visits Coronado: The Coronado Bulletin states that Mr. R. B. Hough of Louisville, N. Y., who is the son of Franklin B. Hough the first Commissioner of Forestry, visited the Coronado offices recently. The present Mr. Hough makes thin wood sections for instruction in wood identification and for various commercial purposes. He has sliced all of the principal woods of the United States, as well as many foreign species.

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Wood Trespass: The Forester last year called attention in no uncertain terms to the necessity of substantially eliminating the petty wood trespasses which exist on some Forests. In order to assist the Supervisors in stopping this loss of material the State laws were carefully reviewed and the possibility of handling these small trespass cases before the Justice of Peace courts considered. This method of handling the work was placed before the Supervisors from whom replies have just been received which show that up to March 1, 39 trespass cases had been handled under the State laws. Thirty-five of these were on the Manzano, two on the Santa Fe, and one each on the Datil and Carson. On the Manzano the Supervisor reports that 27 of the trespassers pleaded guilty. Each was given a suspended fine of $5 and paid costs of $4. Of eight wood trespassers in another series of cases, five were fined $5 and costs each, which was paid, and the other three were given suspended fines of $5 each.

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Grazing Fees Approved: A committee of cattle permittees of the Crook National Forest recently met with Supervisor King and Messrs. Kerr and Hussey of the District office to discuss the proposed grazing fees. The committee approved the range appraisal principles as well as the proposed fees. After the meeting, the Forest officers left for Wilcox, where a similar one will be held. From there Kerr and Hussey will go to the Coronado for three meetings with cattle permittees of that Forest.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Bugs on the Kaibab: For some years the Black Hills beetle has been increasing in destructiveness on the Kaibab Forest and the moderate control measures that have been in effect for the last two years have not held down the insects as was expected. A powerful offensive has been launched against the bugs this spring following the recent appropriation of $25,000 in the Deficiency Bill for this work. Two crews of about forty men each will be set at work immediately. Supplies and outfits are being rushed to the scene of action at the present time.

The Kaibab Forest is highly valuable, not only for its stand of timber, mostly western yellow pine which amounts to 1,750,000,000 feet, but also it is becoming a popular recreational forest. It adjoins the Grand Canyon National Park and is crossed by all tourists coming from the North. It is also a Federal game refuge and deer are very numerous indeed on the area, being estimated at 30,000. In view of these resources, beetle control on the area is of exceptional importance.

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How It's Done in Germany - Or Can You Blow the Horn? A recent applicant for work, an ex-German forester, submitted a copy of his grades in the curriculum of a forest school in Saxony. These were the subjects in which he passed: Forest Construction, Forest Utilization, Forest Protection, Forest Mathematics, Business, Law, Hunting, Drawing, Blowing the Signal Horn.

Editor's Note: No doubt this chap had District 5 in mind when he studied horn blowing.

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DISTRICT 5 - CALIFORNIA DISTRICT

Smoke Wreaths: "Pernicious weed! whose scent the fair annoys
Unfriendly to society's chief joys,
Thy worst effect is banishing for hours
The sex whose presence civilizes ours."

Say, the boob that wrote that poetry sure never worked in a Forest Service headquarters. If he had, he'd have soon found out that an honest, respectable working girl can get all the civilization she wants without associating with human smokestacks. I thought the war was over, but if you could see the smoke screen behind which some of these pseudo-foresters dictate, you'd think it was the Zero Hour in the Argonne. It wouldn't be half so bad if the pipes they use were respectable, and they cleaned them out once in a while, but most of these four-bit "French briars" the men smoke must have been given them to keep 'em from falling out of the cradle.

Sure I like to see a man smoke - but not in my face. My mother says to me the other night: "Mabel, you've been down at one of them cabarets again - I smell smoke." And believe me I had some time convincing her she was wrong. You know the air in this office ain't any too good - blowing in off of that "swimming pool" out front on the Embarcadero, and its right chilly, too, these windy days. But I'd rather freeze to death than be asphyxiated. And did you ever hear a man with a pipe in his mouth dictating? It's a scream! "'n answer tyur lettr of Ferburry twentytuh - Puff! Puff!" Maybe a man needs tobacco to keep his brain cells working, but take it from me his steno don't need the essence of his pipe dregs to keep her pencil moving.

Yes, I've tried to "smoke 'em out," so to speak, by chewing gum long and loud, but it didn't work - it's too tiring to keep up. I reckon I'll have to go up town and buy some of that cheap Woolworth perfume and see if that'll kill the smell, or perhaps I'll have to get a gas mask from the stockroom. If that fails I'm figurin' on having a sign printed, reading: "Please don't smoke in my face - I'm not your wife."--Mabel (Smoked but not Cured).

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Coal Discovered on Shasta: Some of the Shasta Forest timber dates back to the Carboniferous Age. A coal deposit discovered on the headwaters of Kock Creek is going to be prospected by a mining company under permit just issued by the Interior Department. They even talk of building a railroad in to get the coal.--J.R.H.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

D-6 Has the Most Westerly Cape: It has been commonly stated that Cape Blanco, Curry County, Oregon, near the Siskiyou National Forest, occupies the most westerly position in continental United States. A recent communication through the Forester's office from the Coast & Geodetic Survey makes the following statement:

"The most westerly point of Cape Alava (latitude 48 deg. 10 min. north) is in longitude 124 deg. 44 min. 05 sec. west, and is the most westerly point of continental United States. The westernmost point of Cape Flattery is 15 seconds, and of Cape Blanco is 10 minutes, 12 seconds, farther east."

Cape Alava is on the Olympic Peninsula near the Olympic National Forest and lies northwest from Ozette Lake. It is situated in Township 31 N., Range 16 W., W.M.--A.H.H.

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DISTRICT 7 - EASTERN DISTRICT

Sales of Acidwood: A revival of commercial sales of acidwood on the Georgia Division of the Cherokee after a lapse of several years has just been launched with two sales of 100 cords each at $1 a cord. There are several cords of acidwood in this division, which will find an outlet to market over the approved Toccoa Basin road so that a considerable contribution to D-7's timber sales business is definitely in prospect.

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Railroad A Good Cooperator: The Louisville and Nashville Railroad has rightly been named the "Old Reliable," from a Forest Service standpoint at least. Two years ago this road, on the orders of Superintendent M. Seargeant, began an active cooperation with the Forest Service; this cooperation has not slackened. Recently Mr. Seargeant issued a bulletin-board order asking that all train employees within the boundaries of the Cherokee National Forest report any fires discovered; that they pay attention to dumping clinkers and to front end screens; and that all section crews not only report fires but also help to fight them until dismissed by the Forest officers. Employees of this railroad company have in the past two years reported many fires and fought several. The L. & N. Railroad runs through the heart of the Cherokee Forest and the cooperation extended is invaluable.

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DISTRICT 8 - ALASKA DISTRICT

Alaska Game: Several times during the past winter I have heard different ones remark about the apparent abundance of deer on the islands of southeastern Alaska. Some claim that this apparent increase is due to the thinning out of the siwash dogs, while others assert that it is due to a better observance of the game laws. Personally I believe that each of these factors may have had a bearing on the subject but that the main reason is to be found in the fact that we have had very mild winters for the past four or five years and the deer have not died off as they did during winters of exceptionally deep snow. This does not mean that very many deer actually starve to death during an average winter, but the deep snow drives them to the beaches where, in their weakened condition, they become easy prey to the predatory instincts of timber wolves and halibut fishermen, the former eating them on the ground and the latter using them for halibut bait or else marketing them in Prince Rupert or the Puget Sound cities.

During the course of about ten hours travel along Peril Straits on January 3 and 4, 1924, Deputy Supervisor Peterson and I counted 57 deer along the beaches as we passed by on the boat. The game warden at Sitka reports seeing 45 deer in Fish Bay one afternoon in January. Fish Bay is located at the northern end of Baranof Island and has a shore line of about 11 miles.

One significant thing about this is that practically all the deer sighted on these occasions were either yearlings or two-year-olds, indicating that probably not more than half the deer in that locality were in sight - the larger and stronger animals being farther back in the timber along the foothills.--H.E.S., Tongass.

Service Bulletin

U. S. FOREST SERVICE

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BRING THE PRODIGAL HOME

By C. M. Granger, D-2

Old habits are evidently hard to shake. Some years ago we got into the way of speaking of the National Forests recreationally as the "Playgrounds of the Nation." This led to some invidious comparisons between the National Forests and National Parks and, if I am not mistaken, the Forester asked that the term "Playgrounds of the Nation" be made taboo. However, like giving up smoking, we find it hard to do, and rather frequently of late Service publications and newspaper articles have appeared employing this same old term and speaking in a most enthusiastic manner of the number of visitors to the National Forests.

When we gloat over the number of visitors to the National Forests are we not a good deal like the Biblical character who put his ten talents away in a secret place where they did not multiply, rather than like the more thrifty one who invested them at profitable interest? What good is it for us to know and advertise the fact that so many millions of visitors took advantage of the National Forests unless we profit thereby? As I see it, such a census has two very important values:

The first value to us is in indicating the need for physical improvements to provide adequate protection and sanitary conveniences to handle this vast horde, and to give us ammunition when we go before Congress with a plea for additional funds for this purpose. The increase in the appropriation, which seems in a fair way to pass, for the coming fiscal year is evidence that this first value has been generously capitalized.

The second great value lies, or should lie, in teaching us the vast proportions of our educational problem and our educational opportunity. In the first place, are we facing facts or are we indulging in flights of fancy as to the actual number of visitors? As one Supervisor puts it -

"Are we not trying to 'kid' ourselves and overwhelm the public with numbers instead of ideas in our tourist counts? For instance, a party leaving Denver on a well advertised circle trip is counted on the Colorado Forest before it enters the National Park, then on the Arapaho, and again on the Pike."

Is not this likely true in a great many places, and furthermore, isn't it true that counts have included "visitors" who do nothing more than merely cross a National Forest, like the Arapaho or the Pike or the Tahoe, in order to get somewhere else? We are concerned mainly with the "visitors" who stop and use the Forest, even though their stop may be merely an overnight one.

Are we meeting our responsibility and taking advantage of our opportunities which the great number of tourists, even if we deduct duplicate counts and non-stop transients, provides us? Have we not used the recreational lure of the Forests as sugar to make the people think about them and then failed to get them to eat any of the oatmeal which the sugar is supposed to make tasty?

The other day in a general meeting in the District office in Denver, which followed the question-box method, one of the questions propounded by one of our own members was "What is the difference between a National Forest and a National Park?" How many millions of people in the United States who have crossed or used the National Forests are equally ignorant? Why is it that we have been so hesitant about bringing our timber sale cuttings right up to the edge of the roads because we have been afraid of destroying the recreational values? Admittedly, we do not want to cut timber around scenic lakes when to do so would destroy the setting, but have we any better place to show the public that we are practicing forestry than by carrying improvement cuttings right up to the edge of well traveled roads, and perhaps by posting signs calling attention to the fact that forestry is being practiced and what it means? How many of the millions of visitors when they are on a National Forest know that it is there for the direct purpose of raising timber instead of merely to furnish pleasant camping and fishing grounds? How often do our exhibits display pleasant camping scenes or nice summer home areas when they might more profitably show by example how forestry is being practiced or how scientific range management is being brought about? The Forester himself is very wisely going about the country discussing the economic values of National Forests and the economic need for forestry practice wherever trees will grow more profitably than other crops, but are the rest of us holding up his hands? Without dispensing with the sugar, isn't it time that we increase the consumption of the oatmeal and so shape our publicity that we can get over much more rapidly the public realization of the economic value of the National Forests and what is being actually done on them?

I make no claim to originality in propounding these questions. These thoughts are running through the minds of a great many Forest officers, and the unfortunate part about it is that there is a considerable feeling that we have overplayed recreation. Personally I do not think we have overplayed recreation but rather we have underplayed those things which we ought to be teaching along with our sermons on the recreational value of the Forests. Numerous instances show that facts about economic values ably presented find ready and understanding listeners. Isn't it about time that forestry came back into its own?

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GRAZING FEES- THE PRO AND CON OF THE QUESTION

By W. C. Barnes, Washington

Naturally, a majority of our permittees object to any increase in their grazing fees and instead ask for a reduction, probably a selfish but perfectly logical attitude for them to take. On the other hand, they don't seem to have sensed fully the attitude of the other fellow, meaning, of course, the general public, which with the stockmen has an interest in these national resources the stockmen are using. Thus we find our grazing permittees, numbering less than 40,000 in all, objecting to the increase as against several million citizens who look to us to administer these lands for the nation without undue favoritism or granting special privileges to a few. The Secretary of Agriculture is receiving many endorsements from this majority, of which the following is a good sample:

It is from the County Commissioners of Ferry County, Washington, and in part reads as follows:

> WHEREAS, Practically two-thirds of this county is in government ownership within the Colville National Forest and the Indian Reservation;
>
> WHEREAS, The only return to the county from this large area is made by the Forest Service, any reduction in receipts from the Colville National Forest would mean a reduction of the county's share, which would be a great loss to the school and road funds and would make the burden so much heavier on the taxpayers of the county:
>
> THEREFORE, Be it resolved that we, the County Commissioners of Ferry County, Washington, heartily endorse the actions of the Forester and the Secretary of Agriculture, and go on record as being opposed to the reduction of grazing fees on the National Forests to the actual costs of administration.

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EVERY DAY IN EVERY WAY WE GET MORE LIBERTY

By Roy Headley, Washington

The other day while rummaging in the attic I found in an old diary some notes made July 1, 1910, when I was evidently attempting to get into my head the requirements of the annual letter of authorization to the District Forester. The notes at least show where we have come from in the matter of centralized control even if they do not disclose where we are going to. The notes are as follows:

"Must go to the Secretary for condemnation and sale of property over $200."

"Each journey of District men and Supervisors must have specific letter of instructions from District Forester."

"Supervisors do not have to issue instructions to Rangers when travel is within fifty miles from the Ranger District."

"Details to the District office may be forty-five days in length but must not exceed that."

"No freight must be paid under any conditions."

"The Forester must sign authorizations for details, transfers, or travel of officers from one District to another and transportation of household goods."

"Must have Secretary's specific authority for Forest officers to attend Ranger and all other meetings."

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WASHINGTON NOTES

Reforestation in the South: Interest in growing another crop of pine on lands now being cut is increasing rapidly in the South. This is shown by the number of lumber companies taking active steps to bring about reforestation. The Great Southern of Bogalusa, La., has restocked about 1,000 acres with loblolly and slash pine seedlings grown in their own nursery at a total cost of $4 an acre. The following companies are reforesting by leaving the smaller growth and additional seed trees where needed:

Eureka Lumber Co.	Washington, D. C.
Carolina Fiber Co.	Hartsville, S. C.
A. K. Sessoms	Cogdell, Ga.
Jackson Lumber Co.	Lockhart, Alabama.
Allison Lumber Co.	Bellamy, Alabama.

Alger-Sullivan Lumber Co.	Century, Florida.
Weston Lumber Co.	Logtown, Mississippi.
Urania Lumber Co.	Urania, La.
Crossett Lumber Co.	Crossett, Arkansas.
Southern Pine Lumber Co.	Diboll, Texas.

The Forest Service is cooperating with most of these through its representative, Austin Cary.--W.R.M.

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Chief Engineer Norcross has left for Missoula, Portland, and Juneau. Mr. Norcross will be gone two months.

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Forest Planting in Pennsylvania: During the spring of 1924, 24 minicipalities placed orders with the Pennsylvania Department of Forests and Waters for 203,000 forest trees. The municipality of Nanticoke ordered the smallest number, 20 trees, and the municipality of Orwigsburg ordered the largest number, 50,000. Forty-one water companies also placed orders for a total of 870,000 trees.

Information from the State of New York covering orders for such trees received up to April 5 indicates a total demand of 7,361,000. Farmers ordered 3,274,000 of these, farm bureaus ordered 590,900, municipalities ordered 1,120,000, industrial concerns 1,534,000, and others including rural schools, sportsmen's associations, women's clubs, and State institutions 840,500. These figures are merely an index of the development of forest planting in the northeastern part of the United States.--C.R.T.

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AMERICAN FORESTS AND FOREST LIFE wants to run a center page display of photographic illustrations showing the healthy type of children our ranger stations are producing. No studio pictures go. They want kodak or camera pictures taken outside in the ranger station yard, or in the woods, where the children play. If you haven't got good pictures already, put your youngsters on a horse, a log, a sled, or something that doesn't look like a parlor chair, and take a close-up snap. Then send it in. A first prize of $15, a second prize of $10, and a third prize of $5 for the best pictures of ranger kiddies - fine examples of young Americans that our National Forests are producing. This contest closes July 1, 1924.

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The Development of Lumber Grading Rules: The first grading rules of which there is authentic record, according to "Standard Grading Specifications for Yard Lumber," Department Circular 296, were some published in 1764 by Swan Alverdson of Sweden.

In these rules he had four grades: "Bests," or clear lumber, "Good," or select lumber, "Common," or lumber containing numerous sound knots, and "Culls," or usable lumber containing coarse defects.

Grading rules, identical with the Swedish grades, came into use in the New England States in the early part of the nineteenth century and by the time the big lumber cut was being made in the Lake States there were twelve rules.

Since about 1890 all of the large lumber manufacturers' associations have come into existence, and in practically every case the original reason for their formation was the establishment of grading rules.

Now, the combined efforts of the lumber manufacturers, distributors, and consumers, and the Departments of Agriculture and Commerce are all being directed toward standardization of grades, as explained in Circular 296.

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DISTRICT 1 - NORTHERN DISTRICT

Cut in Montana and Idaho Forests Increasing: Thirty-five million two hundred thousand feet of timber was cut from the National Forests in District 1 in the first quarter of 1924. During the same period in 1923 the cut was 21,615,000 feet. The increase for 1924 is about seventy per cent. The value of the timber cut in the first quarter is $93,748.74, amounting to about $2.75 per thousand feet.

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Use of Drag Line Outfit Proves Economical: During the construction of the Ione-Sullivan Lake Road Project on the Kaniksu National Forest it was found to be difficult and expensive to load surfacing material by means of teams, as the gravel deposit lay on a flat bench and the material had to be drawn uphill to get into the loading hopper.

On investigation it was learned that a small drag line outfit, consisting of 12 horse power gasoline engine, 2-drum hoist and 1/4 yard bucket was available in the vicinity, and this was rented at $25 per month. Two thousand two hundred and seventy-five cubic yards of gravel were loaded by this method at a saving of about 30 cents per cubic yard over loading with teams. The outfit was installed at a low cost and kept 2 4-yard dump trucks supplied with material, loading up to 96 cubic yards per day, which was about the maximum capacity of this size outfit.

The initial cost of this outfit was about $1,500. The saving of 30 cents per cubic yard amounted to $672.50 or almost half of the cost.

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Motion Picture Showings: A recent compilation of the results of motion picture showings during the calendar year 1923 develops the fact that 21 different films were used in 96 different towns. There were 215 separate showings, and the estimated number of people reached was 84,794, of which 68,904 were through the regular motion picture theaters. Among those of greatest educational value the RED ENEMY reached the most people - 8,045. FUTURE FOREST GIANTS was second with 7,534, while PINES THAT COME BACK, although an eastern picture, reached 5,430 people. KING SNOW HOLDS COURT stands at the head of the list, having been shown to 14,935 people.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Most Successful District Office Meeting: During the past three or four years we have been holding occasional get-together meetings for all members of the District office. The general purpose has been to keep each other informed about our various jobs and create general interest in the Service as a unit and counteract the tendency toward the one-sided, branch-centered, self-satisfied interest and knowledge that result from working on only one kind of work. Various methods have been tried including lectures, discussions and pictures. All these meetings have been very interesting and well received, but the last seems to have accomplished its real purpose to a greater extent than any of the others.

For this meeting we tried the old question-box idea. All members of the office, who do not go to the field and thereby come in contact with the various lines of work on the Forests, were asked to submit questions about anything concerning the Service upon which they would like to have further information. These questions were then turned over to the various offices for answering at the meeting. Everyone was surprised and pleased at the exceptionally fine list of pointed questions received and at the intense interest that was taken both in the answering and in the answers. Col. Peck said that we would have to try this kind of meeting again.

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The Rocky Mountain Jay: At different times for several years past Forest officers in D-2 have cooperated with Mr. W. C. Bradbury of Denver, a retired railroad contractor and bird enthusiast, and the Colorado Museum of Natural History, in endeavoring to collect the camp robber's nest. Until this effort was instigated, only one or two specimens had been collected in the United States. About six or eight different sets have since been taken including two from the Black Hills region, where the species is slightly different from the Rocky Mountain region, and where the bird is known as the Canadian jay. All the sets so far taken have been during April or early May. The popular belief was formerly that the camp robber nested exclusively in January or February at high altitudes in the spruce belt, based on the one or two finds that were first made. Later collections seem to prove the majority nest in April in the lodgepole belt in the Rockies and the yellow pine in the Black Hills. The altitude of collections so far ranges from 4,400 feet in the Black Hills, South Dakota, to 8,600 to 10,600 in the Rocky Mountain District.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Chiricahua National Monument Established: On April 18, President Coolidge signed the proclamation establishing the Chiricahua National Monument in the Chiricahua Mountains on the Coronado National Forest. The new monument is an area of about 5,000 acres located in the Bonito and Jesse James Canyons on the west side of the Chiricahuas. It contains a great number of rhyolitic rock formations eroded into peculiar shapes. The most typical formations are pillars of 6 to 26 feet in diameter and 50 to 200 feet high. There are also a number of balanced rocks, the largest of which has a base of five feet, is 25 feet in diameter and 30 feet high. The National Monument was set aside on recommendation of the Douglas, Arizona, post of the American Legion, the Smithsonian Institute concurring. Plans have already been made by the Supervisor of the Coronado to make this area more accessible through the construction of trails, part of which have recently been completed.

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New Publication: "Importance of Forestry and the National Forests" is a publication just off the press. The material was prepared by the District office for use by social and civic organizations in the southwest in studying forestry and the National Forests. It should be useful for such organizations as Boy Scouts, Women's Clubs, Camp Fire Clubs, etc. Samples of the publication were sent to Forest Supervisors today and those requisitions which were already on file have been filled. Additional copies may be secured from the District office.

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Game on the Forests: A report on the number of game animals on the National Forests of District 3 has just been completed. It shows that there are 421 elk, 208 mountain sheep, 3,328 antelope, 34,699 deer, 619 bears, and 16,868 turkeys. The Gila is the best game forest in the District. It is estimated to have 7,655 deer, 197 bears, and 4,143 turkeys, which is more than on any other Forest. The mountain sheep are on the Lincoln and the Coronado, while the elk are mainly on the Sitgreaves, with a small overflow on to the Coconino. The Datil has 700 antelope, while the Apache has 2,500 turkeys. In the Arizona Forests there are 16,295 deer, but if the Kaibab, north of the Grand Canyon, is added this figure would be more than double. The Kaibab also has more deer than all of the National Forests in New Mexico.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Final Returns From Name Contest for Fire Protection Week: We can now announce the returns from the contest conducted among the school children of D-4 by the local office of Public Relations to determine the name most applicable to the person who is careless with fire in the woods.

The first prize of $15 goes to Berenice Olson of Whitter School, Logan, Utah, for her name of "Fire Vandal"; the second prize of $10 will be divided equally between Arthur Purnell, Council, Idaho, and James Fife, Menan School, Menan, Idaho, for the name "Forest Spoiler"; the third prize of $7.50 will be divided equally among Gladys Peterson, Tremonton, Utah, Margaret Patton, St. Anthony, Idaho, and Elden Arnell, St. Charles, Idaho, for the name "Scatterfire."

Approximately 1,000 students submitted about 1,300 names in the contest and the careful work of selecting the winners was placed in the hands of several committees to make certain that the best names were selected. Response to the plan was excellent, indeed. Names were submitted by students from all parts of the District, representing little tots from the first grade to senior high school students. Some recognition and encouragement (and incidentally, some very good fire propaganda) will be given to every contestant in the way of typed and printed material.

The money for the prizes was contributed from among the Ogden office personnel in about 15 minutes time. We praise the school children for their great interest taken in this little plan in connection with forest conservation.

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DISTRICT 5 - CALIFORNIA DISTRICT

Rename Mountain Peaks for Service Men: Two mountain peaks in Oregon have been renamed by the Geographic Board at Washington in honor of members of the district forest staff who lost their lives in the service of their country.

In honor of Donald Frazier of Hood River, guard in the Forest Service before the war and who was killed in the Air Service, a peak formerly known as Shell Rock will hereafter be called Frazier Peak. This is located in the upper Hood River Valley.

Oak Grove Mountain in Clackamas County will be called Mitchell Peak henceforth, in honor of Roy Mitchell, member of the district forest staff, who lost his life fighting forest fires a few years ago. This mountain has an elevation of 5,000 feet.

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Going Up: Special use receipts for the first nine months in the present fiscal year exceed by over $10,000 the total special use receipts for the fiscal year 1923. With three months yet to go, and the summer home business booming, we are sure to cross the $90,000 mark before June 30. Next year's special use receipts will surely exceed $100,000.

A Lumber Census Smile: Even the lumber census statistical work is not always humdrum. A recent return forwarded no executed form but gave the essential information by letter as follows:

"Dear Sirs: We have run our mill about 35 days all told and cut about four hundred thousand feet board measure Mendocino County pine. Lost about three thousand dollars in the venture. The mill is for sale and may God have mercy on the poor devil who buys it. We are through."--C.L.H.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

They Came Back for More: The commercial geography class at Stadium High School was addressed recently on "The Business Aspects of Forest Protection" by Deputy Supervisor Griffith. This makes the fourth time these classes have had this subject presented. When a new class is approaching the subject of forests in their regular class work, the teacher, instead of depending upon the text-book, makes an appointment with this office for a speaker. The entire 45-minute period is used, about 35 minutes for the talk, and 10 minutes for questions and general discussion. The class gives the closest attention, and much intelligent interest is shown in the questions and discussion. This is considered a very valuable contact.

Arrangements have been made to broaden this contact by presenting the Economics of Forestry to the entire Economics and Civics department of this high school in the near future. The faculty will place four periods at our disposal, and all told we will directly reach nearly 200 students. Since they will all be required to do written work on the subject presented, their thoughtful attention is practically assured. This is "catching 'em young."

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The Western Lumber Company (Purchasers of 685 million on the Cascade Forest) are getting their big mill pretty well formed and are logging fast enough to keep Scaler S. A. Moore, loaned by the Crater, tied to the landing. The Davis Webber Lumber Company operating on a 7 million sale above Oakridge is in the throes of a financial disturbance and has been shut down until sanitation around its camp is improved.

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DISTRICT 7 - EASTERN DISTRICT

A Rotarian on the Allegheny: L. L. Bishop, Supervisor of the Allegheny, the youngest of the National Forests, has been chosen President of the Warren, Pa., Rotarians for the coming year.

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Long-Bell Company May Establish Reserve: The Long-Bell Lumber Company is considering the establishment of a forest reserve and holding a large portion of their Arkansas acreage for a second crop, provided local taxation does not prohibit such action. The first step was a letter to Supervisor Plymale of the Arkansas requesting information with regard to existing state forestry laws and as to laws which should be passed by the State.

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DISTRICT 8 - ALASKA DISTRICT

"Siwash" Dogs and "Siwashes": No Indian village in southeastern Alaska is free from siwash dogs. In many cases the canine population outnumbers that of the Indians themselves. There seems to be a superstition among the Indians that if they kill a dog bad luck and misfortune will haunt them the rest of their days. There seems to be no love or sentiment about this either, for if a dog dies of his own accord that is his own affair and nobody mourns his loss. It is reported that when these mongrel curs became too numerous in the villages they were taken away to isolated islands and turned loose to survive or perish according to their own ability. Some authorities claim that leaving the dogs on the islands was not always intentional but that in their seasonal migrations here and there among the islands, the Indians were not able to carry the dogs in the canoes so they were put ashore to follow along as best they could. Be that as it may, it is stated upon good authority that many of the islands of southeastern Alaska used to support quite a number of these wild curs. As their numbers multiplied they began to roam over the island like bands of wolves either killing or chasing away all the game on the island. In this, however, they brought about their own destruction, because their need for food soon became so acute that they began killing and eating each other until only a few survivors remained and these were soon picked off by white hunters or else died from other causes.

As the Indian has a superstition against killing a dog, so has he an aversion to feeding or doctoring one. The dogs are therefore to be seen in all stages of age, flesh and health - a lot of mangy, half starved creatures, some of them too old to hardly get out of the way. As these unfortunate creatures have to shift for themselves, they never pass up an opportunity to appropriate to their own use a piece of meat, a side of bacon, or a loaf of bread that might be left within their reach, and woe be unto any chicken that happens to pass within their range. Many a siwash dog has lost his life trying to penetrate some white man's chicken yard. Nevertheless, the birth rate, until recently, has kept pace with the mortality and the siwash dog still survives. In some localities there is quite a concerted effort being made by the whites to do away with this nuisance, and poison is being spread broadcast with very gratifying results. The Indians, too, in some of the villages where the younger generation is in control, are waking up to the fact that the dogs are a menace to the game and are beginning to follow the white man's lead. The siwash dog, therefore, bids fair to become a thing of the past before many more years.--H.E.S., Tongass.

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FORD COMPANY PLANS TO SAVE WOOD

The Ford Motor Company has developed plans for salvaging 90 per cent of the wood now thrown away as useless. Orders have been issued to all branches of the company to save all the wood coming in and to use precautions to see to it that no board is broken unnecessarily. During the last 30 days it has been demonstrated that a huge saving can be effected. The lumber salvaging department employs 600 men and produces from boards ordinarily considered as scrap 93,000 board feet of lumber each week. The yearly requirements of the Ford Motor Company are 300,000,000 board feet of lumber.--Pennsylvania Service Letter.

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LONG-LIVED SHINGLE FROM MT. VERNON MANSION

A sample of wood taken from a shingle of the Mt. Vernon Mansion was identified as cypress. The shingle was laid in 1743, 180 years ago.

DEDICATION OF SAGE HALL AT YALE

The March 7, 1924, issue of the Yale Alumni Weekly contains a full description of the dedication of Sage Hall, the new home of the School of Forestry at Yale University. It was formally dedicated on Saturday, February 23, when Henry W. Sage, son of the donor, received the keys from the architect and presented them to President Angell of the University. Col. Henry S. Graves, Provost of the University and Dean of the School of Forestry, stated that "I know of nothing in the University better adapted to its purpose, and certainly nothing in which the available space has been so completely utilized as in this building."--Pennsylvania Service Letter.

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Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

Vol. VIII, No. 20.   Washington, D. C.   May 19, 1924.

SOME ROAD FACTS

By Roy Headley, Washington

Numerous old subscribers to the BULLETIN have argued that the 9-foot road is dangerous.

On the Klamath, the State of California has a fine 16-ft. highway winding through rough country for about 10 miles. During 1923 this section of road has six deaths to its credit. Speeding of course. Couldn't make the turns or ran into travelers who could not get out of the way. Would anyone say the State should widen this road to 24 or 32 feet on the chance that the speed bugs would thereby be induced to stay on the right side on turns and slow down to speed that is appropriate on curves? If so, would the public approve the burden of taxation which would result from such a policy?

On the new 9 to 12 ft. road, 49 miles long, built between Happy Camp and Orleans on the same Forest, not a death has occurred during the first season's use - although the bluffs are unusually steep and the turns unusually sharp - as Mr. Dodge would say about his unusual car.

It is true, some tourists complain at the lack of width and say "When are you going to finish this road?" but it is also true that no complaint is ever made about a narrower section of adjoining road which has been used for years. The adjoining road has been there long enough for brush to grow up on the lower side and this gives the illusion of safety which seems to be all that is needed.

In the mountains of Northern California hundreds, perhaps thousands, of miles of 7 to 9 foot roads are in regular use by cars. It is almost impossible to find anyone who can tell about an accident on these roads. None of them has such a death list as the short stretch of State highway referred to.

Speaking of the proposal to widen the Happy Camp-Orleans road, the stage driver mentioned the fact that there had been no deaths so far, but remarked that there would be if it should be widened. He thought he would have to have a 5-ton truck to "hold 'em" on the widened road.

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SOME REMARKS OF A PRO-9 FOOTER

By C. F. Evans, D-4

I have been expecting that the editor of the BULLETIN would end the 9-foot road controversy in his columns like he terminated the rumpus over the question of whether or not the cougar screams (I don't know yet what the cougar does when he feels like screaming).

Since the subject of the 9-foot road still appears to be open for discussion, I feel moved to make a few remarks in favor of the pros. The antis always make more noise than the pros. As a race we are built that way, and that is the way we talk and vote. Wherefore it was to be expected that the proponents of our present road standards would remain silent all winter giving the opponents a monopoly on the tumult and the shouting. If one were to judge from the articles in the BULLETIN, the decision would appear to be nearly unanimous against 9-foot roads with one lone defender stemming the tide. Horatius at the bridge (or on the grade?)!

In this District the 9-foot road has both friends and enemies. No one believes that such a road will be suitable under all circumstances but there is a large and growing number of men who think that most of our Protection and Development roads should be built to this standard. This acceptance of the low standard road is not confined to members of the Service, but is shared by a majority of men outside the Service with whom I have talked. We hear far more criticism of the large expenditures for high standard roads in the mountainous region. Take the average business man in a town near a National Forest where we have a road project estimated to cost $60,000 if built to the 9-foot standard, or $100,000 if it is built to a 12-foot width. We might be able to allot $20,000 to the project each year, which would mean that with the 9-foot standard the road would be built and ready to use in three years as against five years for the 12-foot road. Ask the business man which he prefers. Ask some of our Supervisors on Forests where supplies and fire crews in 1924 will have to be transported by horse from one to three [illegible] from the end of the nearest road (usually not as good as a 9-foot road at that). If and when we get these necessary protection roads built we find that the public, of whom P.R. in District 2 is so apprehensive, is soured on us because our roads are too narrow, we can go back and widen them. What is Congress giving us our Forest Development funds for any

We all would prefer to drive over a 12-foot or 16-foot road than over a narrower one, but don't ever believe that the 12-foot road will satisfy everybody. If any District can see their way to the completion of a reasonably comprehensive Forest Development system in the next ten years on a higher than 9-foot standard at the rate funds are being appropriated, that District is in a better fix than we are. How about changing the basis of apportionment if such be the case?

In the last broadside someone intimated that "everybody was out of step but John." If John is out of step, I hope he remains out of step until we get a few hundred miles of very necessary protection roads built or until someone decides to give us more money with which to build wider roads.

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HOW FOREST SERVICE MONEY IS SPENT

By Henry Wold, Washington

The charts on the following two pages show graphically the distribution of expenditures to productive activities, by National Forest Districts, for the fiscal year 1923. Copies of activity-cost summary sheet S-5-R, from which the charts were compiled, were furnished to the Washington and District offices only.

The supplemental activities, Fire prevention (Outside), and Timber sales and S-23 sales (cooperative funds) have been omitted. The charges to the two Improvement activities, Construction and Maintenance, were so greatly in excess of the charges to all other activities combined that two charts are necessary in order to bring out the comparison of smaller activity costs.

Chart I shows the distribution of charges to the two Improvement activities as well as all other activities. For purposes of comparison with the costs the receipts by Districts are also shown on this chart.

Chart II shows the distribution of the amounts given in the second column of Chart I. In order to simplify the chart it has been necessary to combine some of the smaller activities.

CHART I

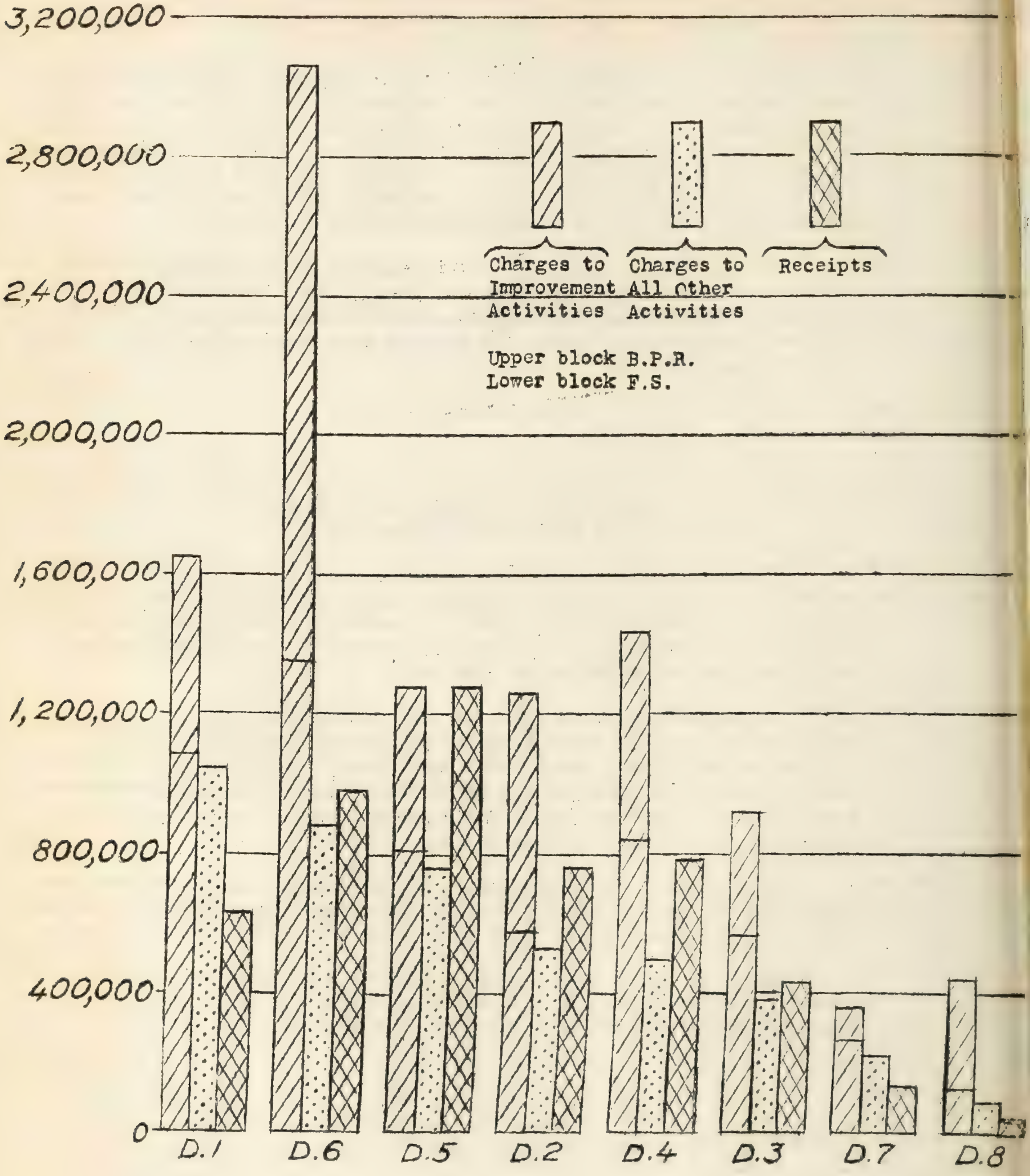
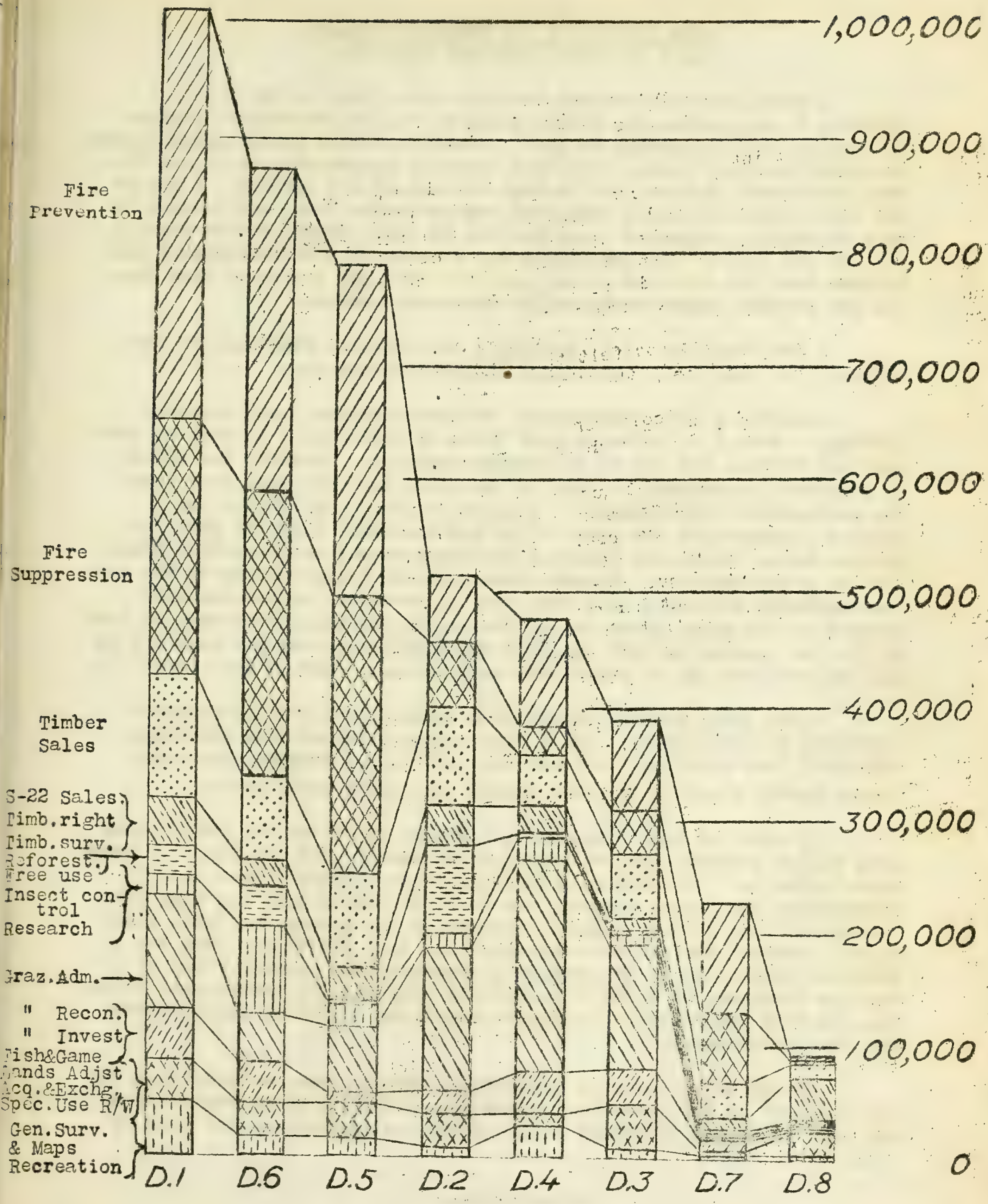

3,200,000
2,800,000
2,400,000
2,000,000
1,600,000
1,200,000
800,000
400,000
0
Charges to Improvement Activities
Charges to All Other Activities
Receipts
Upper block B.P.R.
Lower block F.S.
D.1
D.6
D.5
D.2
D.4
D.3
D.7
D.8

CHART II



Fire Prevention
Fire Suppression
Timber Sales
S-22 Sales
Timb.right
Timb.surv.
Reforest.
Free use
Insect control
Research
Graz.Adm.
" Recon.
" Invest.
Fish&Game
Lands Adjst
Acq.&Exchg.
Spec.Use R/W
Gen.Surv. & Maps
Recreation
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
D.1
D.6
D.5
D.2
D.4
D.3
D.7
D.8

LAKE STATES AND NEW ENGLAND, BEWARE!

By C. G. Bates, Fremont Exp. Sta.

I have always maintained that the white pine is the queen of American trees, ceding the lordly crown to the yellow poplar, perhaps. In view of this allegiance an early attempt was made toward repopulating the Rocky Mountain region with white pine by introducing it at the Fremont Experiment Station, but it went the way of all exotics. A few of the trees, well sheltered from wind and excessive heat, and covered by snow in winter, struggled along for two or three years, but eventually gave up the fight. The conclusion was that our winter atmospheric conditions were too dry, and it was not felt that any degree of care during the growing season could modify the winter effect.

A few seedlings of P. monticola were started from seed in our nursery, but they never grew large enough to plant out.

Recently I have "discovered" at Austin Bluffs, near Colorado Springs, a number of splendid yard trees of white pine, as well as jack pine and Scotch, and all of the native conifers. In fact, the number of successful specimens of each of the pines is sufficient to deserve the designation "plantations." Inquiry of Mrs. L. E. Curtis, who planted a portion of the trees about her own home, fails to give the precise date, though she believes that they were 2 or three-foot trees "early in the century." My own observation on branch whorls of the better specimens indicates that they were planted not earlier than 1910. Several of the white pines are 25 feet high, and the shoots made on them in the wet seasons of 1922 and 1923 are a full two feet per year. I do not believe that any of our native conifers ever grow at this rate.

These trees have of course been irrigated "summer and winter" according to Mrs. Curtis. Those white pines farthest from the house and which have received the least care are barely keeping alive, although Scotch pines on the same ground have grown excellently.

In spite of this care, it is a puzzle to me how the white pines have pulled through, and not only pulled through, but developed in every sense normally. The soil at Austin Bluffs is derived from a highly ferruginous sandstone, however, and it is my belief that the high iron content of this soil is largely responsible for giving the trees their vigor. Another factor which may give rise to a difference from our mountain conditions is the southerly aspect of the ground, which at the low elevation of 6,000 feet probably prevents any severe soil freezing, so that, if watered, the trees should not suffer so greatly from the dry winter winds.

At any rate, it is an interesting showing, and we warn those who are boasting of 100 cubic-foot increments for white pine that Colorado may have something to say if sample plots are restricted to a size of .0001 acre.

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WASHINGTON NOTES

Assistant Reservation Warden Wanted: Former District Forester Smith Riley, now in charge of Reservations in the Biological Survey, has inquired of the Forest Service in regard to men in our organization who might care to consider the position of Assistant Reservation Warden on the Montana Bison Range at Moiese, Montana. The responsibilities of the position would include the general administration of the range and the duties of maintenance of the improvements, care of equipment, and care of the animals, which comprise principally the herds of buffalo, elk, deer, and a small bunch of mountain sheep. Former Grazing Assistant Frank H. Rose of District 2 is Reservation Warden.

Anyone interested should apply through the regular official channels, giving his education, training, and experience.--W.R.C.

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FOREST EXPERIMENT STATIONS

Scientific Silvical Research Essential to Success: The Service seeks to secure several scientists to search sedulously the silvical secrets secluded in several species and successions of species, and to view vivaciously the vigor and virtue of various varieties of virgin vegetation. Descriptions of dominant dendrological developments are deemed distinctly desirable. Ecology encourages endeavors to elucidate in easy epigrams the essential entities engaged in energizing every element affecting establishment of evergreens, elms, etc. Fortuitous forecasts are frequently fallacious. It follows that funds for financing forty or fifty further forestry fellows in future are fundamental to full fruition, and should be forthcoming without fail. Failure to furnish funds would be fatal and foolhardy.--E.H.F.

Really, research reveals rather remarkable rubbish recently.--Ed.

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DISTRICT 1 - NORTHERN DISTRICT

Timber Sales: Of the total of 847 commercial sales of timber made in 1923 from the twenty-four National Forests of Montana and northern Idaho, 759 were under $100 in value. This means that the National Forests are fulfilling an immediate purpose of contributing to the industry and development of the smaller communities adjacent to the National Forests. Twenty-one sales were made for amounts from $100 to $500 in value, nineteen from $500 to $1,000, twenty from $1,000 to $5,000 in value, and twenty-eight valued at over $5,000. In addition, 1,107 small sales were made to ranchers for farm use, at cost of administration.

The twenty-four National Forests in Montana and northern Idaho can produce a permanent sustained annual yield of 668,000,000 board feet. This is on the basis of cutting no more than the annual growth from each Forest, and it is expected, through fire protection and better management, that this amount can be increased in the future.

The cut from these Forests in 1924 was 125,000,000 feet. It is estimated, on the basis of timber now under sale contract, that the cut will be increased to 160,000,000 in 1924 and 190,000,000 in 1925. Much of the National Forest timber is now inaccessible, which accounts for cutting no more than one-quarter of the possible annual yield.

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The First Fire of the Season has been reported in District 1. A homesteader clearing land allowed his fire to escape control on April 28, burning an area of 100 acres, of which only four acres were National Forest land. The fire was put under control by a crew of four men, and action has been taken to collect cost and damages from the man who caused the fire.

It is interesting to note that on April 28 a relative humidity of 9 per cent was recorded at Kalispell, Montana, the lowest relative humidity ever recorded at that place in some 30 years of record.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

One of the Conspicuous Features of Forest Protection Week in Denver was the cooperation received from the Olinger Highlanders, a local boys' organization somewhat similar to the Boy Scouts of America. In this organization is a Speakwell Club, members of which appeared before the various luncheon clubs in Denver and gave a very forceful appeal in behalf of the cause of forest protection. The directness and simplicity of this appeal, together with the striking appearance of these lads in uniform, accomplished more, undoubtedly, than a similar cooperation from adults. The increased interest among members of the Highlanders is also a valuable result of this cooperation.

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A San Isabel Night Dinner was held by the members of the Pueblo Commerce Club April 22. The evening was devoted to talks about the San Isabel; District Forester Beck was one of the guests. The work of the San Isabel Recreation Association was discussed and a series of lantern slides shown by Deputy Supervisor Doering. Among the more important things mentioned during the evening was the building of the American Legion Camp Ground on the San Isabel, designated at the last national convention as the National Recreation Grounds for the Legion, and the organization of the San Isabel Mountain Club. This club is to become affiliated with the Colorado Mountain Club and has for its object the exploration of the San Isabel for the purpose of informing interested people more fully as to its natural beauty and features of interest. It was brought out at the meeting that owing to the excellent widespread publicity which is being given to the San Isabel by the local press, the Commerce Club, and the railroads, heavy travel to the Forest is expected this summer, and a great need now recognized is that of furnishing suitable accommodations for tourists. The thorough appreciation of the people of Pueblo and other neighboring towns of the importance of the San Isabel as a community asset was most strikingly made clear at the meeting.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Sitgreaves Turpentine Experiment: On April 24, fifty turpentine cups were hung on 30 trees in Sitgreaves. The idea of the experiment is to determine the relative yield of gum from black jack, mature yellow pine and overmature pine under different degrees of cupping and methods of chipping. Six trees of each class, black jack, mature and overmature yellow pine, are to be worked with one face only. Two trees of each class are to be chipped with No. 1, No. 0 and No. 00 hack respectively. This will give the yield from the different classes under very light cupping. In order to determine relative yield under heavy cupping, nine additional trees (three of each class) will be worked with from three to four faces on each tree, one tree of each class being chipped with one of each size of hack. Three additional trees were cupped with from one to three faces. These trees were picked with the idea of bringing out some special points. The first streak was put on at the time the cups were hung. Regular weekly chipping commenced May 15, and will continue until the gum ceases to flow in the fall. The gum from each tree will be weighed at the time of dipping and a separate record of yield will be kept for each tree. Ranger Shumway is to have charge of the experiment.

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Sitgreaves Elk in Good Condition: Ranger Baldwin of the Chevelon District of the Sitgreaves says he has recently seen several herds of elk. These are increases from the planting on the west end of the Sitgreaves about ten years ago. A few days ago, he came upon a bunch of sixty or seventy. They were not wild and he was able to get within thirty or forty yards of them. They were all in good condition after winter. He could not determine the proportionate number of bulls and cows in the band because none of them carried antlers, it being the season between horn shedding time and new growth. One of the bands seen not long ago was inside of a pasture. When the elk were scared they ran to the fence at once. Some of them cleared it without hesitation, while others pushed the wires with their breasts first and then when it did not yield they backed off and jumped it easily.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Heavy Losses On Winter Range: Supervisor Mace and Ranger Macfarlane on a recent trip to the Beaver Dam Wash country in the extreme southwest corner of Utah found stock conditions there very deplorable. On the trip it was estimated that between 800 and 1,000 cattle were seen, only a very few of which were in average condition, the remainder being poor. These cattle belong principally to permittees of the Pine Valley and Bull Valley divisions and the large majority are grazed on the Dixie Forest during the summer.

In a six-hour ride on horseback a total of 84 dead cattle was counted, most of which were right along the water in the Beaver Dam Wash. Cattle which were moved a short time ago from the Wash to Jackson and Pahcoon springs near Santa Clara Creek were in much better condition than those left on the Wash and very few dead ones were seen in the vicinity of the Springs. The Santa Clara cattlemen estimate that their loss willbe 33-1/3 per cent and the Pine Valley stockmen estimate a 25 per cent loss, which figures may or may not be too high. They will be doing very well if they eventually come out with a 10 per cent calf crop. The loss is due to the lengthy dry period which prevailed during the fall and winter.

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Still Found: It was suspicioned that a sawmill permittee on the Sawtooth was engaged otherwise than in the sawmill business. Two or three days ago two of the Sawtooth rangers visited the new location of the mill site and the odor of mash permeated the entire neighborhood. Upon examination it was found that a still was being operated, connection being made with the boiler in a fairly concealed manner. The still was seized and the case is being turned over to the state prohibition officers. Supervisor Benedict suggests that we could greatly stimulate business by permitting these conditions to exist.

We suggest that not only would business be stimulated, but the sawmill operator as well.

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DISTRICT 5 - CALIFORNIA DISTRICT

Lake County Fire Protection Association: At a meeting of the associated Chambers of Commerce, Women's Clubs, resort owners and lumbermen of Lake County, held at Kelseyville last month, the Lake County Fire Protection Association was formed. Capt. W. L. B. Hill of Kelseyville was elected president and Wm. C. Hodge, formerly of D-5, secretary. The objects of the new association are to prevent summer fires through education of citizens and tourists, and to secure the cooperation of the Board of Supervisors looking to the offering of a reward of $100 for information leading to the arrest and conviction of any person breaking the State fire laws. District Forester Redington and State Forester Pratt were both present and spoke at this meeting.

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Vacationists Will be Given Protection: City dwellers who go to the mountains for their vacations will be afforded practically the same protection as that given them in their home municipalities.

Public health officers, representatives of the U. S. Forest Service, officials of the Red Cross and managers of municipal camps met in Berkeley recently to consider plans for protecting vacationists who summer in the high Sierra region. As part of the plan the Berkeley Chapter of the Red Cross has interested itself in the provision of emergency health service stations in the Tuolumne and Echo Lake municipal camps, which will provide service not only for members of the camps but for tourists and campers in the region near the camps.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Supervisor MacDaniels of the Siskiyou Talks to His Rangers: It is expected that there will be at least one sling psychrometer in every Siskiyou ranger district this summer. You know - those doo-dads with thermometers on 'em that you use to tell how dry the weather is. They are expected to do as much good as about 150 times the same amount of money invested in hazel hoes. Anything that will give us a slant on how a fire is likely to be burning six or eight hours ahead can save us a lot of grief. There is no manner of doubt about the way they work - that has been proved, demonstrated, and cinched. No matter how far in the interior of Missouri a man was brought up, he will have to admit that they will forecast fire weather.

I wish we had some more of them right now - remember how things dried up last March? And again some time last June? And we kept finding places all last summer where fires had started early in the season, and burned a while and by and by went out without anyone knowing about it? Well - those rinctums that I spoke about would have given a good strong hint that if fires were not burning, it was only because they had not been set, and we could have climbed a hill and had a "looksee" and taken steps according to what we saw.--E.H.M.

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Low Humidity and Forest Fires: From April 24 to 26, the U. S. Weather Bureau recorded unprecedented low humidity for this time of year in the Pacific Northwest. The drop in humidity was accompanied by east winds and followed by forest fires springing up throughout the States of Oregon and Washington. At noon on April 25, the Portland reading was 25, Seattle 12, in the afternoon of April 25 in the Wind River Valley it dropped to 6, and each spark as it lit fell as if in powder. Slash fires quickly got beyond control, several ranches and sawmills being burned. Special warnings were sent out but by Sunday, April 27, the readings rose and the danger period was practically over by April 28. There was another drop on May 1, but this was only of brief duration.

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DISTRICT 7 - EASTERN DISTRICT

What's Doing in Porto Rico?: Progress in forestry extension work centering in the Luquillo National Forest of Porto Rico is indicated by receipt in the district office of the following new circulars from Acting Supervisor Wm. P. Kramer:

"Clasificacion de los Terrenos de Puerto Rico."
"La Necessidad de la Silvicultura en Puerto Rico."
"Manuel de Siembra de Arboles."
"Usos y Caracteristicas de Algunos Arboles Nativos y Exoticos."

Three additional circulars are in process of preparation. All are printed in Spanish for general distribution, but it is hoped to issue them later in English-Spanish combined form.

An exhibit was placed at the Agricultural Fair in Arecibo during the last week in April. Kramer reports growing interest in forestry throughout the island. Applications for forest trees during March called for 92,000 trees in excess of the available supply. Production facilities at the Luquillo Nursery have been greatly increased. A new packing shed with office and storeroom has recently been completed and 105 new concrete seed beds built. The nursery grounds have been completely piped and a new glass propagation shed is being constructed. All of this will help materially in supplying the increased and constant demand for planting stock.

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DISTRICT 8 - ALASKA DISTRICT

An Alaskan Monopoly: Collecting is one of humanity's favorite sports - both outdoor and indoor. Doubtless all Forest officers collect (or attempt to collect) something - barring, of course, five-figure incomes. Howbeit, in the bright and luminous roster of eight (count 'em) District Foresters do we know but one who botanizes. And when a District Forester, amid the multifarious duties of his exacting office, finds time to collect and annotate plant specimens, the fact seems worthy of record - e'en among the cherished pages of this periodical.

The subject of this wee brochure is District Forester Charles H. Flory of the Alaska District ("D. 8") who recently submitted to the Washington office a collection of exceptionally well prepared plant specimens gathered by him on the Tongass Forest, exactly one-third of which are new to Forest Service records. Mr. Flory, however, is no "bud" among Service collecting debutantes; as Chief of Operation in District 6 he long ago "came out" into the 400 of active students of the National Forest flora. One can hardly forbear from wondering whether there is any connection between Mr. Flory's name and his floral-interests. Reminiscent, that surname, of the *croix fleurie* or "flory (flowery) cross" emblazoned on the banner of many a Crusader of eld.--Daytonius.

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Service Bulletin
U. S. FOREST SERVICE
(Contents Confidential)

Vol. VIII, No. 21. Washington, D. C. May 26, 1924.

OUR RESPONSIBILITY FOR GOOD FOREST PRACTICE

By W. B. Greeley

The following colloquy took place in the debate on forestry in the House of Representatives on April 19:

MR. DAVEY: "The all-important thing for us as a government is to buy up the cheap waste lands, millions of acres - according to this report, '81,000,000 acres so severely cut and burned as to become an unproductive waste' - and reforest that as a Government project, and forever keep it under the Government regulations as to methods of cutting.

"I would like to bring out one other point in this connection: The thing that is robbing America of her heritage is the wasteful methodsof lumbering. That is the thing that is doing the appalling damage. Lumbermen, in their eagerness to get rich quickly, cut and slash without regard to the future. The wasteful methods of lumbering are one of the gravest sources of menace to the future."

MR. SINNOTT: "Mr. Speaker, will the gentleman yield?"

MR. DAVEY: "Yes."

MR. SINNOTT: "The gentleman knows that that wasteful method is not permitted on the National Forests under the jurisdiction of the Forest Service?"

MR. DAVEY: "That is right; and it is a very happy situation. In all the National Forests where lumber is allowed to be cut it must be cut under proper restrictions." (Applause.)

This incident is typical of many which have occurred during the last two or three years, in connection with hearings before Congressional committees, in debates on the floor of the House or the Senate, in statements by the Secretary of Agriculture, and in the testimony of men from private life. It is undeniable that Congress and the general public have a tremendous confidence in the Forest Service. While that fact affords just ground for gratification, it also should bring a sobering sense of responsibility. Is the Forest Service measuring up fully to the trust that is so freely and generously imposed in us?

In the last analysis the acid test of our redemption of this responsibility is what we actually accomplish in the woods, the degree of success attained in our forest practice as measured by the condition and productiveness of the lands entrusted to our stewardship. The bearing of the protection of the National Forests from fire upon this accomplishment is so generally recognized and has been so frequently stressed, that I am going to say nothing further about it. The matter that I want particularly to drive home is our responsibility for good forest practice in the concrete results obtained on timber sale areas.

The efficiency of a motor truck, however pleasing its design or imposing its general appearance, is determined by the tractive power exerted by the rear axle. The efficiency of our timber sale administration, however complete and formidable it may appear with supervisory and inspecting officers, management plans, marking rules, and what not, is translated into concrete terms primarily by the productiveness of the areas which we cut over. If we fail in that we fail in the most essential purpose for which the Forest Service exists; and nothing in the way of handsome stumpage returns, popularity with lumbermen, beautifully written bulletins, or anything else can atone for that failure. This means concretely that the energies and capacities of the organization dealing with timber management must be focused upon the traction of the rear axle, that is, upon what we do actually accomplish in the woods, and they must be focused upon that point effectively. This requires unremitting study of what is happening on timber sale areas, the exertion of every possible means of instructing and developing the men in charge of timber sales, inspection that is full of punch, and a constant and serious review of the contract terms and requirements to make sure that they fit the needs of the woods.

There are a few corollaries to this general proposition. The trend of events is bringing greater and greater demands for National Forest stumpage. Applications for timber will doubtless increase in number and, as time goes on, in urgency. To the extent that we can handle this growing tide of business within the limits of sound forest management and with adherence to good forest practice, well and good. But it is far more important to hold up our forest practice to high standards, or improve it if possible, than to increase the volume of timber sales. In discussing with the District Foresters recently how we should utilize the additional funds provided by Congress for timber sales work, the principle was laid down that we should first bring all existing sales up to acceptable standards and then use what might be left for the administration of new sale contracts. It is much better to turn down new business than to have a timber sale areas which we would be ashamed to show to the members of Congress who have expressed such great confidence in the Service.

Another point, an accurate statement of which is more difficult, is the extent to which good silviculture should be sacrificed to the "practical" needs of the operator. I grew up in the Forest Service, more or less, with its timber sale work. I have been through the mill. I have negotiated many contracts with hard-headed lumbermen and felt the pressure to yield at this point or that because of practical necessities; and I have yielded probably as many times as anybody else. I have been swayed by the desire to demonstrate to the forest industries that operations under government contracts were feasible, that we were not theorists, that we were business men and could appreciate the point of view of the other fellow and "get results" in business negotiations as well as anybody. And I have learned too from my own experience. I have learned that some of our earlier requirements had to be modified and I have seen cases where concessions were made that should not have been made because they involved too great sacrifice in the future of the forest.

There is danger of becoming too practical, of giving the operator rather than the forest the benefit of the doubt, of consciously or tacitly surrendering good silviculture or protection to the unremitting pressure for cheap logging or for more destructive logging equipment. Speed and power have been the slogans of western lumbering; and the ingenuity of its engineers is constantly producing machines of more speed and more power. Almost invariably, this means machinery more destructive to the reserved timber and small growth in types where good forest practice demands that these be left on our sale areas.

Forest officers must of course be openminded in dealing with such developments; but it is essential that we maintain a high standard, and I do not hesitate to say an inflexible standard, of the condition in which our sale areas are left. If that means more expensive logging and lower stumpage values, well and good. Silviculture is more important than high stumpage returns. If it means that timber areas are not salable under present economic conditions, again well and good. We will reserve them until we can get them cut as we want to have them cut. Experience has carried the Forest Service beyond the stage where there is any danger of our dealing with the reasonable needs of operators arbitrarily or insisting upon nonessential requirements. The great danger toward which we must be ever vigilant is that of yielding too much in the productiveness of our cut-over areas. We have had enough experience in all of our principal forest types to know how feasible logging can be conducted and at the same time leave cut-over lands in a satisfactory condition. We have got to establish definite rules of practice, for ourselves and for our timber purchasers, that will adequately protect the future of the forest; and then hold to those rules of practice against all invasions. The main point is to get fixed clearly in the mind of every Forest officer that the real test of a well conducted timber sale is the condition in which it is left. That will stand for a generation or more to commend or damn the man responsible for it, long after everything else connected with the transaction has been forgotten.

This conception of timber sales work, of course, cuts much deeper than the regulation of logging methods. It applies with still greater force to our own work in such matters as marking and slash disposal. I have at times been concerned over the indifference of field officers toward destruction of advanced reproduction and young forest growth in the burning of slash, in types where the preservation of this material is the outstanding object of forest practice. It seems too easy to slip into the unconscious point of view that good slash disposal means simply getting rid of so many tons of debris. The removal of the fire hazard is of course the primary reason for slash disposal, but in forest types where our silviculture requires the retention of an advanced stocking, it is equally important that the maximum possible proportion of the young growth be preserved. It is far more urgent that this be accomplished than that the slash be burned at the lowest possible cost. It is far more important to get good slash disposal from this standpoint than to add a few more cents to the stumpage price. The handling of slash, particularly where the cutting is partial or advanced reproduction is to be preserved, is not a clean-up job to be turned over to inexperienced men or cheap labor. It is an essential part of good silviculture.

The greatest satisfaction of a forester is to see areas where a fine growth of timber is coming on as the result of his pains and care. The most gratifying things that I have seen in my field inspections are the extended areas where persistent protection from fire is reclothing denuded land with second growth and the areas where carefully supervised timber cuttings show that our forest practice is not simply a matter of instructions and marking rules but is the real stuff in the woods. Our area of cut-over land in the National Forests is increasing by at least 100,000 acres a year. It will extend much more rapidly as time goes on. The greatest pride and satisfaction that the Forest Service can have is in making these cut-over areas measure up to the specifications of good forestry, in making them a living demonstration that the Service is delivering what the public expects of us.

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WASHINGTON NOTES

Assistant Forester Barnes Written Up: The Washington Star in its May 18th issue devoted the first page of the magazine section to a splendid write-up of Assistant Forester Barnes. The article mentioned the winning of the Congressional Medal of Honor and dealt extensively with Mr. Barnes' duties as a member of the Forest Service.

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Jardine Goes to Alaska: The Secretary's office has just announced the temporary appointment of James T. Jardine, formerly Inspector of Grazing in Charge of Grazing Studies in the Washington office, as special investigator of the Department assigned to study and report fully on agricultural conditions in Alaska. It is understood that Jardine has been granted a four months' leave of absence from his work at the Oregon Agricultural College at Corvallis in order to accept this assignment. The work will be under the office of Experiment Stations in the Department. When Jim's report is in the hands of the Secretary, he will have the information about agriculture in that far-off region, all that's worth while, "An you can lay to that, messmates."--W.C.B.

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FOREST PRODUCTS LABORATORY

Laboratory Fights Forest Fire: A get-away time of nothing flat-almost-is the record made by a bunch of Laboratory men when a telephone call demanded help in preventing a woods fire from burning the homes of some Laboratory members. Armed with rakes and axes, and exceeding the city speed limits, the fire fighters put under control a ten-acre fire in twenty minutes. True, it was not a crown fire, there were no steep slopes, and "humidity" aided, but we think we can qualify in practical application of protection methods.

Of course, our detection system was a little slow, although with a good breeze these hardwood fires cover ground fast at this season. Damage, blistered hands, torn clothes, and reproduction (value not yet computed).

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DISTRICT 1 - NORTHERN DISTRICT

Smokers' Fires: Recently tabulated statistics on smokers' fires in District 1 for the season 1923 indicate that 71 fires, amounting to about 11 per cent of the seaon's total, were due to this cause. The damage by these fires was $459.00, and the cost of handling them $2,250.00. With this kind of a record during the easiest season experienced in District 1 for many years, it is apparent that the "smokers' fire problem" will be a very serious one in a bad fire year.

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Photographs as Educational Material: In response to a request received from a woman in Wibaux, Montana, in the extreme eastern and nonforested part of the State, a set of pictures, ordinary prints, covering forest types and different lines of forest activities was furnished. Titles and information were written on the backs of these prints. The value of photographs in educational work is indicated by the following, quoted from her letter in returning the pictures:

"I am sure you will agree with me on their instructive value when I tell you how little most of us know about the subject. Many were surprised at the large size of trees to be found in our State, also the number of National Forests and their size. Some knew nothing of national supervision of these Forests, also the watersheds and their influence. Not a number (myself included) ~~knew~~ we had a large nursery. The pictures on logging were particularly helpful to me in explaining that work."

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Unsolicited Cooperation: "There is to be a new club in Florence, Colorado, in which there are no dues and mighty few meetings, but to which the male population of Florence will be glad to belong. This club, which is sponsored by 'the two sporting Macs,' Chas. McCandless and Telephone McDonald, has not a name as yet, but will probably be known as the San Isabel Club, or some such title.

"The idea behind this organization is fire prevention and protection primarily. Also every member of the club will be expected to show his interest in the San Isabel National Forest in other ways, such as in seeing that the game laws are observed, building up sentiment for clean camp grounds, and in general acting as unofficial aids to the Forest Service in keeping our mountain playgrounds fit for the generation to come."

The first knowledge any of the Forest officers had of this new club was when the above article appeared in the Florence daily paper under big headlines.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Fire Cooperation with the Indians: As a result of conference held with Superintendent Dairs, Mr. Hayes and Mr. Smith of the Indian Service, Supervisor Roberts expects to obtain much closer coordination in fire control work between the Sitgreaves and the adjacent Indian lands in the future. The Indian Service plans to increase their fire control forces, install Osborne fire finders, and keep their telephone lines in repair. The Indians make good fire fighters, providing white foremen are available. The Sitgreaves will, therefore, attempt to provide foremen for fires on Indian lands and in turn fire fighters will be furnished for fires on National Forest lands. Probably the most important decision reached at the conference was for cooperation in reporting fires found in each other's territory, an obvious need which unfortunately has not always been met heretofore.

* * *

French to Stay: Mr. E. S. French who has been temporarily handling the law work of this District the past three months has been requested from Washington by the Solicitor to remain with us permanently. He has agreed. For several years Mr. French was law officer of D-4 with headquarters at Ogden, Utah; he also served for short periods in a similar capacity in D-5 and D-6. His experience in Forest Service work will stand him in good stead at the present time when the law work of the District is so heavy. He expects to avail himself of every opportunity to meet the field men. In the meantime send in your hard nuts, boys.

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State Nursery Does $5,000 Business: Since the policy was established last year by the State Forester of selling plants from the State Nursery near Davis, 25,696 young trees have been disposed of and the receipts for these have totaled over $5,000. The trees have been used for planting along highways, in municipalities, and by individuals.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

PR Will Have a Handbook: There will shortly be issued for officers of the North Pacific District a Handbook of Public Relations. Its purpose is to bring together in one volume all instructions, suggestions, statements of methods and other information relating to Public Relations Work. It will have a table of contents and a complete index, since it is for reference purposes and no reference book is worth anything unless one can find a reference readily and quickly. It will be in mimeographed form, with loose-leaf cover, allowing amendments to be readily inserted, and contain some 60 pages. Since Public Relations has no Manual such a handbook should prove of real help to all Forest officers.

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Comments from Seattle Laboratory: A report is in preparation at the Seattle Laboratory covering inspections of Seattle's Second and Fourth Avenues wood block pavements. The pavements were constructed of creosoted Douglas fir. The last inspection of Fourth Avenue was made after it had been in service for approximately 12 years. Second Avenue was inspected after approximately 10 years' service. These pavements are in the heavily congested district and have been subjected to unusually hard wear.—C.W.Z.

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DISTRICT 7 - EASTERN DISTRICT

Spring Fire Season over in District 7: The record of Forest fires up to May 1, 1923, showed a total of 857 fires with 55,819 acres burned over. The record for the same period in 1924 is 554 fires with 29,084 acres burned over. The larger number of fires has occurred on the Ozark and Arkansas Forests, the 1923 records for the Appalachian Forests being 289 fires and 141 fires for 1924.

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Military Reservations Examined in District 7: Four hundred thousand acres of land embraced within 18 military reservations have been examined and favorably reported on to the War Department by the Forest Service, and 3 reservations, with a total area of 5,000 acres, were unfavorably reported on. There are 5 reservations on which reports will be made during the coming field season.

DISTRICT 4 - INTERMOUNTAIN DISTRICT

Men and Wages: Comment has been made during the past year concerning the number of boys employed on the Forests on road and trail work. On some jobs the average age appears to be under twenty-five years, which means that some are doubtless in their teens. Recently someone said, "This is because we do not pay high enough wages to attract the best men." Without wishing to start a long argument, we will state that on the average men above twenty-two years of age are better on such work than men under twenty-two. Some of us believe that men over forty are better than boys under twenty-one. If you don't believe this, watch them work (especially along about 11.00 a. m. and 4.00 p. m.). The boys may be, and usually are, willing, but they get tired more quickly, have less interest, and their judgment has not been developed to take advantage of work.

It is possible that instead of trying to control the situation by means of a definite age limit, we should pay the wage needed to attract mature men and then weed out the inefficient by insisting on high standard work. We can't expect to compete with the mines or other industries employing skilled labor but for like work the pay on Government jobs should meet the average paid outside.

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DISTRICT 5 - CALIFORNIA DISTRICT

Herding Timber Sales No Child's Play: It is very easy to say that the timber cut from a certain area was 55 million board feet. But did you ever stop and think how much work was involved by the Forest Service to see that this amount was cut according to our regulations? On the Lassen this past season the above figure represents the combined cut of the Lassen Lumber & Box Company and the Fruit Growers' Supply Company.

Using the theoretical eight-hour field day as a basis, the time spent by all the members of the Lassen force on the various activities was ten days for Marking Boundary, 146 days for Marking Timber, 706 days for Scaling, 73 days for Brush Disposal, and 58 days for General Supervision, making a total of 993 days. In other words, if one man had been doing all the work it would have taken him 24 hours a day for eleven 30-day months.

It took 161,876 logs to make this 55 million feet. If they were placed end to end they would make a string of logs 510 miles long. Fifty-five million feet of logs, if sawed into one-inch lumber, would cover an area 1.4 miles square. Incidentally, it took 1.7 pencils to figure this all out.--V.S.B., Lassen.

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

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DOES IT PAY TO LOG SMALL TREES?

By E. N. Munns, Washington

Foresters have a tender solicitude for young trees, but it is only recently that they have produced dollars-and-cents reasons why lumbermen should leave the young things instead of slaughtering them for a supposed profit. The latest reasons are advanced by Lumberman J. H. Price of California, who finds that cutting all the stand instead of leaving about 14 or 15 per cent of it in the shape of small trees reduces the average grade and consequently cuts the average value from $33.73 to $32.86 per M feet of lumber.

District Forester Redington, in sending Mr. Price's report out to a number of lumbermen, wrote to them:

"Lumbermen, I believe, have been inclined to feel that leaving seed trees could not be done without increasing their operating costs and diminishing the profit....I feel certain that you would be very glad to leave the necessary number of young trees on your land to restock the area if you were convinced that this class of material could not be handled at a fair profit.

"In connection with sales of National Forest stumpage it is customary, as you know, to leave from 10 to 15 per cent of the average B.M. volume of the stand. This volume left is made up very largely of trees between 12 and 28 inches in diameter. In the report it is indicated that when 13.9 per cent of the stand is left the average per M value of lumber produced is $33.73, whereas when all merchantable trees are cut the average per M value of lumber produced is reduced by 87 cents to $32.86.

"Experiment by Prof. Bruce of the University of California School of Forestry has indicated that the cost of log making, i. e., falling, limbing, and bucking, is three times as much per M for 18-inch trees as for 48-inch trees, and previous studies which we have conducted show that the cost of sawing 20-inch trees is twice as great as for large, mature trees. We have also convinced ourselves by careful study that the cost of yarding by donkey is six times as great for 18 to 20-inch trees as for 40-inch trees, and three and one-half times as great as for 30-inch trees.

"The results of these studies certainly raise a grave doubt as to whether the logging and manufacture of young, small trees is a profitable undertaking at the present time. In other words, it appears very probable that lumbermen can leave a reasonable number of seed trees on their land and at least incur no loss by so doing."

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MAKING PIPE, CIGAR AND CIGARETTE SAFE

By George B. Sudworth, Washington

Reading J. G. Peter's note in the SERVICE BULLETIN of April 14 on a "Safety Cigarette Extinguisher," I am reminded of a simple homemade device I saw last summer in the now nearly pineless sections of northern Michigan. I was riding with Ruben Babbitt of Grayling, State Game Warden and Fire Guard, who, an inveterate smoker himself, lost no opportunity to caution everyone else against the danger of forest fires. As a simple and convenient means of taking care of tobacco ashes, he had fastened at the center of the "dash" of his flivver a 5-inch-square empty chocolate box, open at the top, and on the front of which was pasted a brilliantly colored lithograph portrait of a well-known movie star. Fitted into the open end of the box was a tin funnel, on the inner face of which was a pasted label reading: "Cigar and Cigarette Ashes." The author of this device always closely watched anyone riding with him to see that all sorts of tobacco fire was deposited in the near-by receptacle. Usually, the attractive smile of the movie star at once caught the stranger's attention, and involuntarily he would know how to safeguard his "smokes." The old warden admitted that a lady had suggested using the picture as a first aid.

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MORE INFORMATION ON TUMBLEWEED, AND AN ANSWER

By Edward P. Ancona, D-3

Bill Barnes in the April 7 issue of the "SERVICE BULLETIN asks for information on tumbleweed and gives the really startling news that in all the Government collection in Washington there reposes but one specimen. One lone tumbleweed! Por dios, hombre!

Say, Bill, guess you never lived in Albuquerque in that section known in the primitive local tongue as "Up on the Mesa." And built yourself a bungalow - $100 down and $50 a month forever - and put a woven wire fence around it to keep kids out, to keep kids in, to ward off the livestock drift from the Manzano Forest seven miles East, etc.

You'd then know what tumbleweed is - all species, all varieties, from all the States, sections and ranges of the universe. Don't know if tumbleweed crosses the briny or not, but some of that that lodges on our fence sure looks like it's fresh from a Cook's tour.

How much do you want - a specimen, a dozen, a bale, a carload? We can fill any order, retail or wholesale, after one of these spring zephyrs - which here in springtime is about one a day. All varieties carried in stock on our wire fence catch-all.

When the wind's from the south we get tumbleweeds from all the Rio Grande valley, from the Datil and Gila forests, from Mexico, and all points South; a western breeze brings fine samples from the sunkist fields of Arizona and California; Colorado, Utah, Kansas ring in their contribution on a Norther - the Manzano forest, principally, a fine crop on an eastern blow.

Tell you, we're the tumbleweed center of the universe and after forking 'em off my fence for four years, burning them in piles as high as hay ricks, converting them into enough wasted heat units to run a dozen locomotives - why, we would welcome the establishment of a tumbleweed experiment station right astraddle our fence.

Want any more information, Bill?

The Answer

By Will C. Barnes, Washington

Once in a Service meeting in the Washington office Colonel Greeley brought up the prospective exhaustion of the timber in this country. Someone asked if this question was not somewhat akin to the old story of the boy and the cry of "Wolf! Wolf! Wolf!"

Headley, fresh from the wilds of California, ventured the statement that after a year's residence on and considerable travel around this side of the Continent he had not seen so many convincing evidences of the imminence of the disappearance of timber on the Atlantic Coast; in fact, he had seen no signs of the "Wolf" whatever. Zon, who had taken no part in the discussion, broke in here with the query, "But, Headley, are you sure you would know a wolf if you saw one?"

Remembering my residence of many years in New Mexico and a certain bunch of vegetation that used to pile up against our fences every fall and form an awful fire hazard, I'm inclined to ask the same question of Ancona, "Would you know a tumbleweed if you saw one?" Anyhow, has he yet sent in a sample of what he calls Tumbleweed? Just a sample, not a bale, will do us. Vamos, hombre, vamos.

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OREGON RANGE MANAGEMENT BULLETIN

By W. R. Chapline, Washington

"Management of Range Grazing Land," Oregon Agricultural College Extension Bulletin 366, by J. T. Jardine, formerly head of the Office of Grazing Studies of the Service, A. H. Lindgren, and E. L. Potter, is one of the most practical publications on range management. It gives concise and clearly understandable statements of the application of the principles of range management as developed by the Forest Service and the investigations of the Oregon Experiment Station to Oregon conditions, private as well as Forest range. Their conclusions in brief are that:

"1. The beef or mutton produced in the winter time on hay, grain, silage, or any combination of these feeds, will cost more than the normal selling price of beef or mutton * * *";

"2. The time when sheep or cattle are really making a profit above the cost of feed is when they are on grass * *";

"4. The expense of four to five months' winter feed is so heavy that the only chance of a net profit for the year lies in keeping the animals gaining as rapidly as possible during every day of the time that they are on grass. This in turn means a better management of grazing than has been the general practice.";

"5. The big opportunity for improvement in methods of livestock feeding, therefore, lies in better methods of grazing management rather than in more extensive winter feeding. As a means of bringing about increased production and lessening the costs, better methods of grazing must therefore take rank with those other important steps of progress; namely, increased percentage of calves and lambs, diminished losses, and improved breeding."

They outline as follows the "essential points in the management of range grazing land";

"1. Use range for the class of stock and for the length of grazing season to which it is best adapted.

"2. Do not use the range until the grass has had two weeks' growth.

"3. Do not overstock.

"4. Practice deferred and rotation grazing, thereby giving the grass a chance to reseed every third or fourth year.

"5. Adopt a salting plan for cattle that will better distribute the cattle over the range and so prevent local overgrazing and undergrazing.

"6. Do not bed sheep more than one night in a place, except in an emergency.

"7. Permit sheep to graze early in the morning and late in the evening.

"8. Permit sheep to graze quietly in open formation."

Has a rather familiar ring?

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WASHINGTON NOTES

A Banner Year in Statistics: Previous to the World War it was part of the regular procedure to gather annually statistics of production or consumption in a wide variety of industries depending upon forest materials. In 1911 eight bulletins were issued, and this was the last year in which so large an amount of census inquiry was carried on. The lack of fresh statistics for certain industries in the 12 years intervening has at times been very awkward.

Owing to our present cooperation with the Census and other bureaus it will be possible next year to make a very complete showing for 1923, which fortunately was a fairly normal year for this period. The kinds of material to be reported on are lumber, lath, and shingles; railroad ties, pulpwood, mine timbers, cooperage, distillation, veneer, tanning extract, poles, excelsior, fuelwood, fencing. The Bureaus which will cooperate with the Forest Service are Census, Economics, Entomology, Pathology, Foreign and Domestic Commerce, Geological Survey, and Bureau of Mines.

As a rough estimate, over 99 per cent of the field will be covered, the omitted items being piling and vehicle stock, handles, furniture, etc. In addition to fresh annual figures, a revision of the various conversion factors used heretofore is under way. The new table of drain on forest resources which will result may alter some of our numerical conceptions relative to the use of forest products.--R.V.R.

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DISTRICT 1 - NORTHERN DISTRICT

Bitterroot Boy Bumps Backwoods Belief: A short time ago while on our way to a stock meeting Ranger Shockley and I stopped at the combination store and post office at Sula. Shockley went in and I remained outside to hold the team. Our rig was only a few feet from the front door, which was fitted with a sliding window that had been left partially open. I could hear every word spoken in the small storeroom. There were several men besides Shockley and one boy about fifteen years old congregated about a large wood stove. The conversation was considerably animated. There were two men who were the old time mossback type of farmer stockmen arguing that timber had no influence on streamflow. Their argument consisted principally of describing certain spots up in the mountains where water came out of the mountain side without any timber about it. The balance of the grown men, with the exception of Shockley, were saying little but seemed to rather favor this idea. Shockley said very little save to occasionally encourage the fifteen year old boy who was very ably arguing the other side of the question. I was somewhat amazed at the information which this boy had in some way obtained. He made as good an argument against the older men's worn-out theory as the ordinary Forest officer could have made. In short, it was not very long until he had the opposition backed off the stage with nothing left for them to say.

Now this boy is not a relative or close friend of any Forest officer and his parents know little of the National Forest subjects, but the boy goes to school and has listened to rangers lecture and talk on National Forest resources and policies. The illustration I have given is not exceptional. If you go up and down the Bitterroot Valley and talk to people of all ages, you will find that in general school-age boys and girls know a lot about forestry and the National Forests. I regret to say that the grown-ups, and especially the old-timers, know little about the subject and apparently do not care to learn.

The old-timer will soon be gone, and if we continue effective work with the boys and girls the next generation will be composed of people with sufficient knowledge and lack of old-time prejudice to make forestry a real vital part of the Nation's progress.--J.W.L.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Forest Officers and Americanization: The following letter was received from Mr. Paul Armstrong, Naturalization Service, United States Department of Labor:

"I believe you will be interested in two rather unusual examples of Americanization work with which I have come in contact during the winter and early spring. Both have to do with Forest Rangers working in Wyoming.

"For two years we have endeavored to organize citizenship or Americanization classes at Foxpark, Wyo. As you know, there are extensive lumber workings in Foxpark and quite a colony of aliens has been gathered there. There was little work that they could do during the winter months, and I had hoped that we might be able to organize a citizenship class for adult foreigners for that period. We were unsuccessful in our plans until last summer. At that time I talked with Mr. K. J. Helmick at Laramie and went over our Americanization plans with him. Mr. Helmick had been in touch with the school situation in a general way, but had done nothing toward establishing a class. During the winter of 1923 the class was organized at Foxpark under the direction of Mr. Paul L. Ginter, a Forest Ranger. Mr. Helmick has written me that the class was very successful and that there have been thirty or more aliens in regular attendance. Text-books and other teaching material have been furnished by the Naturalization Service, to Mr. Ginter, through the county superintendent of schools for Albany County, Wyoming. The men found the small school without lights and therefore purchased out of their own funds a high-powered gasoline lamp which they have presented to the school.

"As an offshoot of Lake Creek Camp at Foxpark another class was started by Mr. Geo. W. Howard, a Forest Ranger at French, Wyo., in cooperation with the Naturalization Service and the county superintendent of schools for Carbon County, Wyoming. We have furnished text-books to Mr. Howard and the last report I had was to the effect that the men are considering the purchase of blackboards, and are even talking of asking the lumber company to donate lumber for them to build a larger school house.

"These two classes are rather unusual in my experience, and may open the field for other similar classes during the winter months when the timber cutters are idle. It is a distinct piece of Americanization work which is worthy of commendation, and I take pleasure in bringing them to your attention."

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DISTRICT 3 - SOUTHWESTERN DISTRICT

District Office Changes: The Forester has approved the following order of succession effective June 1, on which date A.D.F. Leopold's active connection with Operation D-3 terminates:

A.D.F. J. C. Kircher from PR to Operation as Chief.
A.D.F. J. D. Jones from Lands to PR as Chief.
D.F.A. M. M. Cheney, Asst. in Lands to A.D.F. Lands as Chief.

No assistant is going to be supplied in Lands until such time as volume of exchange and other Lands work makes such assignment necessary. For a long time, much of Mr. Cheney's time has been devoted to DL and other assignments. This assistance will now, of course, have to be withdrawn but with Mr. French in DL it is not needed.

Mr. Kircher has been in the Forest Service, D-3, continuously (except for his Brazilian World's Fair assignment) since July 1, 1909, when he entered as Forest Assistant on the Coconino. His assignments include the deputyship of the Coconino, about four years as Assistant in Forest Management, $3\frac{1}{2}$ years as Supervisor of the Santa Fe, and 4 years in the DO, part of which was in Operation on fire and improvement correlation work, and since July 1, 1921, in charge of the Office of Public Relations.

Mr. Jones entered the Service permanently in D-1 September 12, 1910, as a ranger, having served previously on summer assignments in 1908 and 1909. Except for a short period of military leave, his work in the Service has been continuous since 1910. For four years he was employed in D-1 on various field assignments, largely in connection with what is now Lands work; from 1914 to 1920 in the Washington Branch of Lands, largely on classification work, and since February 1, 1920, in D-3 in charge of Lands, in which latter capacity he has established many PR contacts. In his inspection work he will help out Lands to a marked degree just as Kircher, while in PR, was able to do a good deal of Operation inspection.

Mr. Cheney, after six years legal work in the Post Office Department and General Land Office, came to D-3 in February, 1913, and has served continuously since that time in the capacity of Assistant in Lands except for two periods aggregating about $1\frac{1}{2}$ years as Assistant to the Solicitor and a few months in private work in southern Arizona.

The foregoing assignments will put eminently qualified men in charge of the respective offices, will do this without appreciably disturbing the continuity of the work in the offices, and incidentally will effect a saving of one man in DO overhead.--F.C.W.P.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Streams and Rivers Running Low: Arrowrock Reservoir now contains only 89,000 acre feet of water, as contrasted with 202,000 acre feet a year ago today. All streams and rivers are running extraordinarily low, with no snow in the mountains to replenish them. A Boise man, who intended to operate a dredge on Salmon River this summer, said that the dredge was now resting on the rocks where last September it was in four feet of water.--"Boise Post."

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DISTRICT 5 - CALIFORNIA DISTRICT

Oakland's New Municipal Recreation Camp: The city of Oakland is going right ahead with the establishment of a new municipal recreation camp on the Plumas National Forest on Spanish Creek a short distance below Quincy Junction and some six miles from the town of Quincy. This will be the second camp of this kind to be established by Oakland.

Business men of Quincy subscribed $1,250, the Forest Service $500, and the County Supervisors furnished the necessary bridge and culvert material for the construction of a road from the county road into the municipal camp site. The Western Pacific Railroad Company is to construct passenger and freight platforms at the camp, and will stop trains there during the camping season.

In addition to the usual summer camping season, it is planned to utilize the camp for the housing of winter sports parties that would be brought in for week-end holidays.--L.A.B.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Low Cost for a High Tower: Ranger Foote of the Colville constructed a cabin and tower on Jack Knife Mountain last fall. The tower was 50 feet high, having a 14-foot base and a 6-foot platform on top. This tower has 3 bents with double cross braces on each side of each bent, all braces are tapped into the corner posts and thoroughly nailed, making the structure absolutely solid. All corners are guyed to large stumps, the guy lines are tightened by use of turnbuckles. There is absolutely no vibration to this tower. The only vibration a person might feel from the top would possibly be from his knees. Ranger Foote put up this tower and also a cabin for a cost of $350.00.--L.L.H.

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WANTED to exchange 4 or less Sectional Units Y. & E. #50 for a like number of Sectional Units Y. & E. #60. Address Forest Supervisor, Chelan N. F., Okanogan, Washington.--P.T.H.

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Pays to Advertise: During the last six months the Colville has advertised about a dozen ax-tie areas, which contain 5,000 to 150,000 ties. Recently an area of 6,000 brought two bids which is a record breaker for the forest, as in only one other case has a bid been received for this product. This gives a total of three bids from the advertisements recently made. In fact, they are the only bids made for ax-ties in the history of the forest. This product is bringing more revenue than sawtimber. A large number of operators are paying the same prices in Class A sales, but seem to fear tackling areas containing 10,000 or more ties. Possibly it can all be blamed to the railroad for not giving more than six months' notice in regard to the market.--W.J.S.

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MONTANA UNIVERSITY OFFERS TO HELP

According to word received from District 1, the University of Montana has offered to allow Forest School students who have been assigned to guard positions on the various Forests to leave school any time between now and the end of the school year if called upon to take up their duties in advance of the original date on which their assignment was to take effect. This offer was made in view of the emergency fire situation.

Calls for such students, however, should not be made prior to the closing of the school year on June 7 unless emergency conditions fully warrant.--R.H.

Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

Vol. VIII, No. 23. Washington, D. C. June 9,1924.

THE LIGHT AND THE BUSHEL

By Tom Gill, Washington

We were fighting mosquitoes and between onslaughts watching the moon rise over a spur of the Cascades. It was, so far as those stinging pests would allow, the hour for retrospect and story. Guthrie, under skillful guidance, was led back over the years to tell of the men, the customs, and accomplishments that have helped in weaving that many-colored tapestry that we call Forest Service tradition. He told, I remember, of men who had contributed their bit of pattern, added their own touch of color, and passed out of the life of the Service. He spoke of others who from the early days have guided and are still guiding the innumerable shuttles of plans and policies that change here and there, even as conditions change, as experience teaches, and as our wisdom grows. And behind it all, although the details and colors varied and gave place, one can see a definite design still in the making, although none may say what the finished work shall be.

So it seemed to us sitting there that both the unfinished pattern behind us and its trend into futurity are not the work of any one man, or group of men within the Service, but must rather be the resultant of factors in which each one according to his force or vision makes his own individual contribution, leaves his own imprint. It was a thought carrying its own inspiration and bearing its own sense of responsibility to the end that what we give be worthy of the pattern.

Guthrie told of fire-line heroes and of many a Ranger who had faced danger in upholding the game laws or bringing to justice the trespasser and incendiary. And of men who had left their imprint in a less spectacular but no less important way. Of the timber sale so well carried out that a new forest stands as witness to work well done. Of the men who had devised new methods, better and quicker ways of doing the daily task. Of the men who had changed enmity and resistance to Forest Service ideals into friendliness and cooperation. Tales of loyalty and service and vision, and of hard unremitting labor and courage. Worthy of preservation and emulation - certainly worth recognition beyond that afforded by a few yellowing letters hidden away among the dust of the closed files.

So we talked, then, of means by which some fitting and tangible recognition might be given to perpetuate and make known both those outstanding accomplishments and the men who had made them possible. But how and what would be the best way? We weren't sure. Yet it would seem that whatever the form such recognition should accomplish two purposes. It should serve to make the accomplishment known to all of us in the Service. It should provide in some way the constant reminder that these men have performed some meritorious service.

But these things are details only and Headley in his BULLETIN article, "Honorable Mention," makes some specific suggestions as to how these details might be carried out. But details aside, is the idea good? Would not some such system of citation or honorable mention serve to bind us a little closer in the knowledge of a common tradition and enable us to share, and perhaps to emulate, these outstanding high-lights of accomplishment? And since all human progress seems to possess as its ultimate basis a system of incentive and reward, ought we to neglect, as it may be we have neglected, the giving of fitting recognition to the man or woman whose work by its outstanding quality has fully merited it? A matter of simple justice, but more than that, I think it is a way of securing greater solidarity and an additional pride in the work and ideals of our far-flung organization.

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HONORABLE MENTION

By Roy Headley, Washington

Do you know of a Ranger District or a Forest where some man has been plugging along in a quiet way, putting in hard work and administrative inventiveness until the results command your deep respect? Do you cherish the inspiring recollection of some incident when at a fire or in dealing with tough citizens some Forest Officer displayed a degree of resourcefulness, courage, or endurance that you feel is worthy of some sort of general recognition? Do you ever have the feeling that it would be a gracious and fitting thing for the Service to search out the finest achievements by individual members of its personnel and recognize them in a simple, informal way?

If the Service would regard such a thing with favor the Forester is ready to give the word to have it started.

Probably most men will think "it depends on how it's done." All right, let's consider how it should be done, if done at all.

Can we assume general agreement on the following points?

1. Citation list or honor roll - should be simple and informal.

2. Should be limited to the personnel attached to the Forests - no D.O., or Washington office man need apply.

3. Citations should consist of a brief paragraph to appear only in Service Bulletin.

But there are several other questions to consider. What is the best way to get citations recommended and passed upon? Would we agree that recommendations be initiated by anyone in the Forest Service? How should they be passed upon? By the District Forester and Forester? Or should a board consisting of representatives of the different branches and offices be given authority to decide?

Would it be well to work out a quota for each District, based on number of field personnel in each District, citations to appear one each week in the Service Bulletin - a single citation per week for the entire Service?

Should the citations be left unsigned or should the names of men making the original recommendation be given?

If sufficient interest in the subject is shown by letters to the Bulletin editor, a vote will be taken later.

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SEDGES TO BE DETERMINED

By W. A. Dayton, Washington

Service "weed-pickers" have doubtless remarked the fact that for the past two years or so lists of plant collections reported out from Washington have been conspicuous by the absence therefrom of names for sedges (Carex, Cyperus, Scirpus, and related genera). During this period, unfortunately, there has been no one in the Bureau of Plant Industry competent to name these plants. Last September Dr. Coville obtained the consent of Kenneth K. Mackenzie, a well-known attorney of Maplewood, N. J., and New York City, to determine gratis Forest Service sedge material. Mr. Mackenzie is familiar to Service botanists by his preparation of the Carex portion of numerous floras, including Britton & Brown's Illustrated Flora of the Northern States and Canada, Abrams' Illustrated Flora of the Pacific States, Rydberg's Flora of the Rocky Mountains, etc.

Dr. Coville has recently received word from Mr. Mackenzie that he is recovering from a long and serious trouble with his eyes, and expects shortly to sail for Europe. On his return from abroad Mr. Mackenzie hopes to be physically able to tackle our sedges.

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STATISTICS AS RESTORERS OF FAITH

By E. E. Carter, Washington

Just after reading a fine appeal based on the "exhaustion" of the timberlands of the East, and getting up a glow over the expansion of the lumber industry in virgin stands of the West, along comes a pamphlet of dry tables from the Census Bureau. The figures in it must be correct, for the Service helped collect them. These tables give the lumber production for 1922 by States. Yes, Washington is 'way in the lead again, and Oregon and California are among the first five States. But listen. More lumber was cut in 1922 in North Carolina than in Idaho, and more in Maine than in Montana. New Hampshire led New Mexico, and Vermont and Massachusetts each produced more than Arizona. Connecticut and Maryland precede Colorado and South Dakota. Even Delaware and New Jersey are ahead of Wyoming and Utah.

Who said the forests of the Atlantic States amount to nothing? "Second-growth" as a source of lumber is already a real thing. There is a lesson in this for all foresters. Can we learn it - and use it?

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WASHINGTON NOTES

Stanley Augspurger's Grave Decorated: Of the 19 men whose names appear on the Forest Service Memorial Tablet, Stanley Augspurger of District 6 is the only one who is buried at Arlington. He lies west of Fort McPherson, at the end of the long drive, in grave No. 941 of the European section. He died as a result of the submarine attack on the transport Tuscania near the Irish coast.

On Thursday the men and women of the Forest Service gave generously for the purpose of decorating Augspurger's grave. A handsome wreath of bronze magnolia and palm was purchased and placed upon his grave on the morning of Memorial Day. A letter has been written to Mr. W. L. Augspurger at Dayton, Ohio, informing him of that fact.

Augspurger is the only one of our World War veterans who lies within reach, and it has been suggested that if the decoration of his grave were continued each year, the action would be entirely appropriate as expressing our abiding interest in all of the 19. Expressions of opinion on this subject would be welcome from all members of the Service.

It is a matter worthy of consideration whether the graves of some others whose names are on the tablet might also be decorated by Forest Service friends. Donald R. Frazier lies in the National Cemetery at San Francisco. Herbert H. Harvey was buried in Mt. Hope Cemetery, San Diego, Ray F. Greathouse at Judith Gap, Montana, and Marcy L. Menden at Wells, Nevada, are probably much more difficult of access to any members of our organization.--R.V.R.

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FOREST PRODUCTS LABORATORY

Northern Pulp and Paper Manufacturers Not to be Driven Out by Southern Industry: In discussing the possibilities of pulp and paper development in the South, Austin Cary at the Paper Industries Exposition referred to the fact that the spruce region of the Northeast is only one-eighth as large as the southern pine region, and that two cords per acre yearly is common; 60 cords of rough wood per acre at 25 years old was personally recorded as opposed to 20 cords of spruce in 40 years predicted by Canadian authorities. Pulpwood at $5 a cord at southern mills is compared with $20 a cord in the North. Cost of planting is $4 per acre, and in New England $10 to $12 or even $20 per acre. The cost of standing wood should never rise beyond $2 a cord, Cary says.

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The importance of the South in this connection is unquestioned. The wood, the power, and the potential labor supply are all there. Great possibilities are in the South, but it must not be assumed that the industry in the North is doomed. At present the available woods of the South are limited to the manufacture of soda and sulphate pulps. Such pulps are only suitable for use in book, wrapping, and magazine papers, and in boards. This condition will continue to exist unless some new pulping method can be developed which will produce paper suitable for other uses.

The big paper tonnage (exclusive of boards) is newsprint made from ground wood and sulphite pulp. Southern woods cannot be pulped by these processes at present. Until a substitute process for the utilization of southern woods for paper of this kind can be found, northern species will be drawn upon to supply the type of pulpwood needed.

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FOREST EXPERIMENT STATIONS

Jack Pine No Slouch of a Tree: That jack pine is assuming a place of honor in the Lake States is indicated by the fact that it is worth $6 a single cord along the railroad near Solon Springs, Wisconsin, and that Ford trucks with two-thirds of a cord capacity haul it for distances of up to 20 miles over dirt roads on a regular operation (not a clean-up job). A small diameter of 4 inches is specified by the purchasers with the expectation that pieces 3 inches in diameter will find their way into the pile; they are readily accepted.

Jack pine in the Lake States is one of the easiest species to manage. It takes a short rotation, yields heavily, is in great demand, and readily reproduces naturally. The Lake States Forest Experiment Station is undetaking the construction of a yield table for jack pine which, when made available, should hasten the day when this species will be put under forest management by large landowners; a time not so very far distant, as some large owners are now acquiring areas of young growth for future pulpwood.

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Dr. Hofmann Resigns: Julius V. Hofmann, who has been in charge of the Wind River Forest Experiment Station for many years, resigned on April 25 to enter private forestry work. He has been in the Service in this District for some eight years engaged entirely on research work. His outstanding accomplishments have been his studies in the natural restocking of Douglas fir in this region (fully covered in his new Bulletin No. 1200 just published) and his studies in relative humidity as affecting forest fires, both of which have received a large amount of interest from lumbermen and timberland owners of this region. His relative humidity conclusions have been accepted by the lumbermen of this region, as well as a large number in Idaho and Montana, as one of the most practical accomplishments ever given to them by the Forest Service.--J.D.G.

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DISTRICT 1 - NORTHERN DISTRICT

Carrier Block Used in Bridge Construction: During construction of the bridges on the Boswell Road Project on the Kaniksu National Forest it was found necessary to devise some means of handling heavy timber in the bottom of the gulches, as the banks were so steep and the bottoms of the gulches so boggy that teams could not be used on the work, and to erect 40 feet gin-poles would have been too expensive. A 3/4 inch cable 150 feet long was stretched across the top of the gulch about 10 feet higher than the floor of the bridge. A light carrier block equipped with a latch was built in the camp blacksmith shop, and run on the overhead cable, and operated by team power. An effort was first made to purchase such a block, but there did not seem to be one on the market to suit this purpose, all available blocks of this kind being very large and made to be operated with steam or gas power. The block when completed weighed about 80 pounds. It had a 3/8 inch shell and was equipped with 4-6 inch shives. The latch built in the center of the block locked when the load was lifted, and held it in place, thus taking the strain off of the team while the timber was being run along the cable to the point where it was to be used.

The material and labor on this block cost $30.50. It was used to handle all heavy timber on this project and for picking up rock for crib filling and for handling heavy bridge timbers on the Meadow Creek-Eileen Project. Its use cut the costs on bridges materially.

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D-1 Emergency Rations Fill the Bill: Orders have been placed with District 1 for emergency rations by all Districts except Alaska. While it is understood that there are not many fires in Alaska, it is hoped that there will be a few in order to make the distribution 100 per cent complete. With the large number of rations to be prepared it is believed that a material reduction in the cost per ration over last year will be possible.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

West Texas Chamber of Commerce Meeting: Assistant District Forester Jones and Supervisor Arthur have just returned from Brownwood, Texas, where Mr. Jones gave an address on the Lincoln National Forest from a recreational standpoint before the West Texas Chamber of Commerce. This organization is composed of 307 cities that hold an annual convention. Usually a three-day program is staged covering a wide variety of subjects. The convention this year at Brownwood was attended by approximately 25,000 people. Mr. Jones reports that the West Texas people are very much interested in recreation, and the Central Chamber of Commerce is planning to stage a motorcade having representatives of as many of the towns as they can assemble take a tour through the Lincoln Forest this summer. Texas has no State forests of its own where people can spend their vacations. The Lincoln National Forest, therefore, is the nearest point where mountain scenery and such advantages may be enjoyed. It is believed that there is a great deal of interest in recreation and that a large number of people may be expected yearly from this region. Supervisor Arthur has already conducted the representatives of the West Texas Chamber of Commerce over the Forest and has been very ably supported by Mr. Claude Simpson, the Secretary of the Roswell Chamber of Commerce.

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Pioneers and Gullies is the title of an article by Aldo Leopold in the May Sunset Magazine, in which he discusses the erosion problem in the Southwest and suggests remedies for the erosion evil. The article is well worth reading, especially in view of the fact that erosion is one of the really large problems now facing the National Forest administration in the Southwest today.

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Boy Scouts Handled Fire Demonstration: Two troops of boy scouts, one from Showlow and the other from Lakeside, Arizona, on the Sitgreaves, recently met Forest officers midway between the two towns for instruction in fighting forest fires. There were twenty-four boys in the party. Under the direction of Deputy Supervisor Lessell, Rangers Kartchner and Shumway and Mr. Cook of the DO a small fire was put out in a safe place. Verbal directions had been given in advance. When the fire was good and hot and certain stately yellow pines were in danger, Lessell gave the signal for attack. With a limited number of fire tools and other improvised implements the scouts went at it like veterans. Fire lines were quickly thrown about the area and interior lines saved the trees in the nick of time. The boys were also taught how to build a safe camp fire and how to cover it as well as how to leave a clean camp. Rangers Kartchner and Shumway believe they now have two dozen faithful allies in fire prevention.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Back from the Wilds: The La Sal force have recently suffered a severe disappointment in what they believed was permanent improvement work. Two forestry cloth salesmen visited the La Sal with samples of cloth for Forest officers' uniforms, possessing the most remarkable properties. It was impossible to wear it out, it was fireproof and the most severe rains would not penetrate it. They invested. The suits which were wonderfully cheap, considering the high class quality of the goods ($15 or thereabouts), were received not long ago and Ranger Quigley put his on for a day in the oak brush. He returned home in tatters. Supervisor Olsen profiting by his sad experience wore chaps over his suit. In the evening, upon his return to headquarters, he removed his chaps and found that the metal clasps on his garters had worn holes through the trouser legs.

The District Office was visited by these same salesmen, but nobody bit here; not so much on account of superior wisdom as the lack of the necessary $15.

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Fire Law Enforcement - A Good Start Made: The Payette fire organization agrees there is but one route to follow in case of man-made fires left unextinguished, and that route is active prosecution under the law. We learn that on May 18 a dentist and a jeweler from Boise left a camp fire unextinguished in a dangerous location while on a fishing trip along the State highway through the north fork of Payette River Canyon between Banks and Smiths Ferry. Mr. Shellworth of the Boise-Payette Lumber Company and Mr. Coonrod, State Firewarden, saw these gentlemen leaving their camp fire unextinguished. They followed them in an automobile and soon overtook them. They required first that these men return immediately to the fire and thoroughly extinguish it. Later, as a result of the active interest taken by Messrs. Shellworth, Coonrod, and Supervisor Mains, a hearing in the case was held at Boise May 21, and as a result the U. S. Commissioner felt that the defendants had been careless and negligent in failing to extinguish their fire, and they were bound over to the U. S. District Court which will convene in Boise September 8. We believe this is a mighty good start toward the proper fire law enforcement for 1924, and every Forest officer in the District should be fully as energetic in apprehending and prosecuting those who are careless in the woods as Mr. Mains and others have been in this case.

A lightning fire occurred on the La Sal Forest on May 12. The season is indeed early.

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DISTRICT 5 - CALIFORNIA DISTRICT

Another Angeles Resource: While excavating for a trail in San Antonio Canyon, Ranger Shay unearthed a cache of some 260 bottles of assorted "booze" of ancient vintage, which he immediately proceeded to destroy in approved "prohibition agent" style. As proof of discovery and destruction Charlton has a photograph which he exhibits with considerable show of emotion.

From 15 years' experience in southern California "Ole" Friedhoff says that this is the only "prospect" on this Forest ~~that~~ he has ever heard of that appears to warrant further development. All that is worrying Charlton and Friedhoff is that they were not "in" at the discovery.

It is feared that this discovery will result in another epidemic of mineral locations in San Antonio Canyon.--L.A.B.

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Watershed Values: July 1st, 1923, the transmission line of the San Joaquin Light and Power Corporation started a fire on the Santa Barbara Forest near the Santa Maria River. It burned about 4,980 acres of Government land and 1,320 acres of private land inside the Forest. Trespass proceedings were started and in figuring damages and costs for the report, items were included as follows:

Total cost of fire suppression, ...	$485.67
Damage to 840 acres of brush land burned over @ 37½¢ per acre, ...	315.00
Damage to 4,140 acres of open land burned over @ 2½¢ per acre, ...	103.50
Total, ...	$904.17

The company settled for this amount in full on April 23.

I believe this is the first instance in which we have placed an actual value on brush cover by the acre and received a settlement for actual damages.

The administrative and protective cost per acre per year for the Santa Barbara Forest figured out to be 2½¢ and the replacement period for brush is 15 years, and for open range one year.—W.V.M.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Originator of Forest Protection Week: Herbert Evison, the very live Secretary of the Washington Natural Parks Association and Editor of the Washington Motorist, attended as a delegate the recent conference on Outdoor Recreation in Washington, D. C. Mr. Evison has always been a strong friend of the National Forests and in 1920 was the first to originate the idea of Forest Protection Week.

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Many F.P.W. Radio Messages Sent: The following radio messages were sent out in this District during Forest Protection Week:

April 22 - W. G. Weigle, "Help to Prevent Forest Fires - It Pays," Seattle, Wash., Post-Intelligencer Station, Seattle, Washington.

April 22 - Jno. D. Guthrie, "Forest Protection Week," Morning Oregonian, Portland, Oregon.

April 23 - F. A. Elliott, State Forester, "The Burning Forest," Morning Oregonian, Portland, Oregon.

April 25 - Geo. H. Cecil, "Prevent Forest Fires - It Pays," Morning Oregonian, Portland, Oregon.

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DISTRICT 7 - EASTERN DISTRICT

Arkansas Takes Forward Step: A forward step in forestry has been taken by the State of Arkansas through the appointment by Governor McRae of a Forestry Commission, consisting of some 30 prominent citizens, whose duty it will be to study the State's forestry problem this year and recommend a program to the next session of the legislature. J. H. Hamlen of the Hamlen Stave Company is temporary chairman of the commission, with Dr. A. C. Millar, Editor of the Arkansas Methodist and an ardent forest conservationist as executive secretary. "It is our idea," says Mr. Hamlen, "to crystallize public sentiment in favor of forestry laws. We have none in our State, which is one of the very few so situated. We hope to obtain such legislation as will allow us to receive federal aid as provided under the Weeks fire protection law. We haven't even a fire warden in Arkansas."

Among many Arkansans the organization of this commission is looked upon as the turning point toward success in the effort to swing Arkansas into line in forest conservation. Those of the D-7 force who have labored in this field are also hopeful that next January will mark the entrance of Arkansas into the ranks of the forested States organized and cooperating in forest fire protection.

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Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

Vol. VIII, No. 24. Washington, D. C. June 16, 1924.

"ONWARD, FOREST SOLDIERS!"

By Jno. D. Guthrie, D-6.

Lee P. Brown, in the Service Bulletin of April 28, seems to be decidedly militaristic in likening the Forest Service to a regiment. He's inviting the wrath of the pacifists and the noncombatants - than which wrath there is said to be none greater.

As I understand him, the little Forest Service Regiment - the Green Army, it might be called in this war game (all in uniform, with service stripes of course) - is going somewhere, marching past as it were, with a look of do and dare on its face. It must be going forward to its objectives!

And Brown placed Major R. E. Search in front with the colors, and the Experiment Station Band next. Can't you hear the martial music of Experiment Stations, led by Bandmaster Major X. Perimenter? And what is the tune they are marching by -- it must be that new one, "It's All Humidity!", made famous at old Camp Madison Lab!

The Color Guard is out in front - what a lively picture - with Sgt. N. England on the right, then Sgt. A. P. Palachain, Sgt. S. Outhern, Sgt. L. States, then the brothers Sgts. P. River and W. N. D. River. But where is Sgt. Sun Y. Cal? Surely not A.W.O.L.? Don't the very names of these sergeants suggest a cross-section of America?

Then comes on, in quick-step time, Colonel C. Forester and his Staff, and what a goodly Staff it is! All Lieut.-Cols. and Majors, including the Staff experts Major Action, Major Objective, Major I. N. Formation (G-2), Major Report, and of course the Medical Corps under Major Operation. Following them comes the Headquarters Companies and the Supply Companies, under Major S. Depot (for we need pencils and gem clips in this man's army). Then the eight Battalions, each in command of Major Dist. Forester. He too has a Staff - Captains O. P. Eration, F. M. Anagement, G. Razing, L. Ands, with specialists like Captain P. R. Elations in charge of Intelligence, Capt. P. R. Oducts, and the Battalion Engineer Officer, Capt. D. Eng.

Next are the Companies, each with its line Captain. There is Captain Super, and he has Lieuts. D. Eputy, G. Examiner, F. Assist, Sgt. D. Ranger, Corporal Guard, and -- and -- but there are no privates - not even a Private Means!

And yet somehow the Brown line of march seems not in accordance with either the new Regulations or the new Manuals. According to the new Tables of Organization, shouldn't Major R. E. Search be in the S.O.S. (Service of Supply) of this green and gallant little Army? He would be far to the rear it is true, but he and his corps would be furnishing the very sinews of war. And then Experiment Stations -- would they not be the Munitions Plants -- to supply the Green Army with bullets, shells (yea, poison gas, if needed), and shrapnel with which to demolish the lines and strongholds of the Enemy, the Red Enemy? For be it known, that the Red Enemy has a large Army, a very large and predatory army - not merely a regiment - that it has many corps and many general and lesser officers. Our Major I. N. Formation and Captain P. R. Elations (Intelligence Section, if you please) have already reported in advance much of the enemy and his strength; that there is much fire in the country, with tremendous destruction and damage to the terrain, streams and springs fouled, wild life driven out, and that much of the country has been ravaged, with the loss of many lives and millions of dollars worth of property. Also that on some fronts the Enemy is firmly entrenched, on others the resistance will be slight, but that the Enemy's numbers run into the millions. It is know that there are sectors in command of General Ignorance, General Apathy, and General Forest Neglect, General Opposition having died on the field of battle some time ago. The Enemy is also reported to have considerable disaffection in his ranks. -------- And so the morale of the little Greem Army is greatly improved as it goes forth to battle!

INSECT CONTROL PROJECT, KANAB, UTAH

By F. P. Keen, Bureau of Entomology

> "Bugs to the right of them, bugs to the left of them
> Onto the Kaibab strode the one hundred."

I actually get dizzy spotting the trees -- dozens - hundreds - thousands of them - bugs on every side. You start to mark trees and round and round you go in a circle or spiral or ellipse or hyperbola or just plain snake fashion until you have forgotten where you started and where you are headed for. I just finished marking a forty, which will look like a demonstration of the clean cutting system when the treaters get through - not a single tree over six inches without a tag on it. I can't tell you yet how many it will run to the section, if you must have your figures dished up in this style, but the last section we marked in the "clean territory" ran 922 trees - probably the group infestation will run 2000.

I could not help but be impressed with the fact that contrary to the rule in the D. brevicomis infestations ~~infestations~~, the Black Hills beetle actually prefers the black jack pine from 6 to 20 inches in diameter and cares very little for the weakened or mature trees. Studies of the ring growth on beetle-killed trees will show that there is no retardation prior to attack and often the trees have speeded up their growth just before being killed. It is certainly a revelation to those forest officers that have entertained doubts about the ability of insects to kill healthy timber.

Two camps of about 45 men each are now in operation and are cleaning up an immense amount of territory from the north end of the mountain on towards the south. While the funds are totally inadequate to make a clean-up of the infestation, the attempt will be made to thoroughly clean all of the territory in a solid block that can be covered before the end of the season. This should give us tangible evidence as to the effect of control work and its possibilities under such conditions.

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LINE FORMS TO THE RIGHT FOR THE RAISE!

The Arizona Daily Star
Tucson, Ariz.

April 21, 1924.

Mr. F.C.W. Pooler,
Albuquerque, New Mexico.
Dear Sir;-

After 15 years of editing, I believe this is the first time I ever took occasion to thank a press agent for his work. It has been a real pleasure to use the stuff you have sent the Star on fire prevention. I have felt that every line of it was news and didn't begrudge its propaganda value one bit.

Every once and a while a press agent sends us one good story, mixed in with a series of waste-basket feeders, but the only reason I haven't used all of your material was that we don't print a paper big enough. I hope you'll give your press agent a $50 a week raise.

Yours sincerely,

(Signed) Talbot T. Smith,

Night Editor, Arizona Daily Star.

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WHAT GOES WITH HONORABLE MENTION?

By Roy Headley, Washington

If the practice of recognizing exceptional achievement, proposed last week, is adopted, should there be anything more concrete about it than honorable mention? Increase of salary, transfer to a better or more responsible or pleasanter position would give such recognition a pleasing reality, but such things would be difficult to work out in practice.

How about some form of insignia - a sleeve stripe or a star? Do we like such things or not? Would men honored by such recognition wear a simple emblem expressing that recognition with a sense of pride and dignity, or would they feel embarrassed about it?

Discussion in Washington indicates the belief here that the Forester's present practice of writing a letter of appreciation to men who are recommended for such recognition should not be abandoned even if citations are made in the Service Bulletin.

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HORSES FOR FOREST OFFICERS

By Huber C. Hilton, Medicine Bow

If it is possible Mr. Headley's suggestion that horses be furnished Forest officers can be put into immediate effect, the Medicine Bow Forest hereby makes first requisition.

At the present time we have at Laramie a Government horse-breeding station, maintained by the Division of Horse and Mule Investigations of the Bureau of Animal Industry, in cooperation with the University of Wyoming. An attempt is being made at this station to develop a general utility horse which can be used both for saddle and light work. Each year, the excess horses are auctioned off at a general or private sale and a number of good saddle horses disposed of. No doubt, the proceeds from such sales are not available for the current local expenses and the Bureau of Animal Industry might be willing to transfer them to the Forest Service rather than to sell them.

If the Forest Service desires to start breeding saddle horses, perhaps arrangements could be made with the local station for combining this work with the present experiment.

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WASHINGTON NOTES

Austin Cary to Sail for Europe: Austin Cary of the Branch of Forest Management is sailing for Europe on July 9 as the Service representative on the commission of Americans which is to study the naval stores industry in France. The commission is to visit the Landes region for the purpose of studying the methods of turpentining and management of turpentine forests used by the French with a view of adapting these methods to American conditions. The commission was appointed by the Secretary of Agriculture.

Clarke-McNary Bill Now a Law: In the closing days of Congress the Clarke-McNary forestry bill was passed and signed by the President. This bill ranks high among important forestry measures, and the Service is greatly elated that it was not caught in the jam that characterized the end of the session. An article on the bill will appear in an early issue of the Service Bulletin.

Mr. Sherman Back: The Associate Forester has returned from his field trip. Col Greeley is expected to leave for a trip around June 15.

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FOREST PRODUCTS LABORATORY

Upson to Leave Forest Service: Arthur T. Upson, Chief of the Section of Industrial Investigations, Forest Products Laboratory, is the latest man to be taken by lumber interests. On July 1 he joins the staff of the National Lumber Manufacturers' Association.

Upson has had a successful career in the Forest Service, having entered the Service in 1910. In 1921 he came to the Laboratory as Chief of the Section of Laboratory Operation. A year later he was made Chief of the Section of Industrial Investigations where he organized new lines of investigative work dealing with logging, milling, and grading of lumber, and the manufacture of wooden products.

American Packing Sells the Goods: The attention given to packing methods in the United States is recognized by an English journal as follows: "America, of course, is a long way ahead of us in the matter of scientific packing. . . . The experts in that country have realized the important bearing which packing has for both manufacturer and consumer, and they have raised the various processes to a fine art."

Commenting on the foregoing, J. C. Nellis of the Department of Commerce, Lumber Division, says, "The American container industry and its organizations and the Forest Products Laboratory of the United States Department of Agriculture are to be congratulated upon this recognition of the efforts they have made during recent years in the development of construction along lines of greater service and less cost."

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FOREST EXPERIMENT STATIONS

New Experiment Station Work Affords Opportunities: Congress, during the session just closed, passed a $50,000 item permitting the establishment of a forest experiment station to be known as the Pacific Northwestern and for a material increase in the work of the Southern Forest Experiment Station in the southern pine territory. Both of these stations offer opportunities for men within the organization who are interested in research work.

The new station in the Pacific Northwest will be established on about the same basis as the stations in the Northeast and in the Lake States, where work was inaugurated last summer.

The additional allotment for the Southern Station makes possible the largest experiment station so far established and offers greater opportunities, perhaps, for those who desire to get into forestry research work in the South than does the work at any of the other stations. Because of the desire to secure men with southern training or with a knowledge of the South, there is an excellent chance for a number of men to avail themselves of a place in the development of forestry in this region.

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DISTRICT 1 - NORTHERN DISTRICT

Clearwater Folder Published: The Clearwater folder, the first to be issued in District 1 covering specific Forests, has just been published. It includes the Clearwater, Selway, and Nezperce National Forests, or all of the territory tributary to the Clearwater region in Idaho. It was designed for the purpose of furnishing information in convenient form on this great undeveloped wilderness, as well as to tie in the value of the National Forests to the farming and other communities adjacent to them, and to answer inquiries in regard to recreation.

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Early
Unusually/Fire Season: The 10-day fire report ending May 20 showed a total of 140 fires to date, with an area of 21,000 acres burned over. About three-fourths of this area was on private lands, so that the total National Forest area burned was only about 5,000 acres. Sixty-two of these fires occurred prior to May 11. The fact that so many fires occurred so far in advance of the usual opening of the season and before the protection organizations of the Forest Service and the protective associations had been put in shape has made the work of suppression particularly difficult.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Forest Officers on the Stage: An innovation was introduced in Forest Protection Week activities by Rangers Russell and King of the Lincoln who staged a play entitled "Be careful with fire in the woods," at Mayhill on April 25 and repeated at Weed. The play, which was written by the rangers, concerns two young fellows who came to the Lincoln and go into the timber business. It is written with a lot of local color and brings in a good many facts about the Forest Service, and above all contains a valuable lesson in fire protection. By such a method the local communities were not only given pleasant evening entertainments but undoubtedly absorbed some valuable lessons in fire protection. In commenting upon the play, Supervisor Arthur states that it drew large crowds and is still the talk of the countryside, while its popularity is also shown by the fact that "The Weed-Mayhill Forest Protection Week program gained so much popularity that requests have been made to have it put on at the Log Camp and Carlsbad. One enthusiast offered to supply a truck and carry the stage Forest and other fixtures, while a limousine is to be supplied for the actors, stage director, manager, etc."

The Rangers are to be congratulated both upon the idea and upon putting it across so enthusiastically.

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Ranger Lives to See the Wind Change: Says Ranger Taylor in the Crook Bulletin, "Procrastination may be the thief of time, but time works wonders in its own way. The Supervisor of the Tonto told me that a lady friend of mine had called at his office the other day, and being highly educated, had waxed eloquent in my behalf and spoke in glowing terms of my efficiency as a ranger. Imagine my surprise when he mentioned the name of a lady of many summers,one who has written various Forest officials of my shortcomings and inefficiency, and who once chased me up a mountainside with a businesslike looking shotgun pointed my way."

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A Good Timber Acre: One measured acre on the Flagstaff Lumber Co. sale cut 44,060 feet of western yellow pine and 430 feet of black jack,and a calipered stand of 2,050 feet of black jack was left. This single acre supported a virgin stand of 46,540 feet. There were also 520 seedlings from six inches to three feet in height.

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DISTRICT 5 - CALIFORNIA DISTRICT

Uncritical News -- and Us: Few Forest officers have not been tempted to cry, "Oh Lord, how long?" at the amount of misinformation which is printed -- and reprinted -- by the lay press touching the interests of forestry. If they would only broadcast the real truth, or even apply the eagle eye of our professional criticism to the stuff which good will for forestry leads them to reprint from other oracles of wisdom! And yet--.

In the Service Bulletin for May 12 appears a paragraph copied from the Pennsylvania Service Letter, a publication likewise professionally guided. This paragraph is entitled "FORD COMPANY PLANS TO SAVE WOOD." The gist of it is contained in the sentence, "The lumber salvaging department employs 600 men, and produces from boards ordinarily considered as scrap 93,000 board feet of lumber each week." Such an amount of lumber, salvaged by merely taking care of superannuated packing boxes and other scrap boards, is really quite impressive enough, by itself, to warrant the designation "a huge saving" applied to it in the sentence of the paragraph preceding the one quoted. And all might have gone well, had the sentence quoted not invited trouble by putting alongside the amount of the saving the fact that it took 600 men to accomplish it.

It takes very little artthmetic to show that 600 men, at the Ford minimum daily wage of $5, would stack up a weekly payroll of $18,000 or $16,500, according as the Saturday half holiday is included or excluded from the pay. And if this cost is all incurred to salvage the 93,000 board feet of waste lumber (and there is not a hint in the paragraph to the contrary), then the saving of that scrap and cull lumber costs $177.50 per M, on the least of the above weekly wage figures. And this computation omits supervision and overhead costs, which, entirely within reason, could be expected to put the total cost above $200 per M. And this is scrap lumber; and Henry Ford is supposed to be retaining at least a small profit over and above what he gives away to his employees and the public. Shades of Munchausen! C. L. R.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Augspurger Honored; On March 5, 1924, the U. S. Geographic Board approved the change of the name of Bald Mt. (5384 ft elevation), Skamania County, Washington, and within the Columbia National Forest, to Augspurger Mountain, in honor of Stanley R. Augspurger, formerly stationed at the Wind River Experiment Station. Augspurger gave his life in the World War.

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Ranger Jack (busily sawing out boards for something or other).
Supervisor: "Jack, what you going to make?"
Ranger Jack: "Thought I'd fix a lean-to on the house for these new manuals they're sending out; ain't got any more room in the Station."

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Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

Vol. VIII, No. 25. Washington, D. C. June 23, 1924.

ALLAH! DELIVER US FROM STEREOTYPED CITATIONS

By John B. Cuno, Washington

Tom Gill's "Bushel of Light" is not only a wonderful thought but a masterpiece of description and good English, and certainly deserves the consideration of everyone of our "far flung organization." But consider for a moment Headley's plan of working out a quota for each District. The Forester's order might read something like this:

"You 2,000 people of the National Forests (not you DO or Washington people) are allowed one citation a week in our Service Bulletin, 52 a year. We have a space reserved for the brave deeds of your workers, reported and exaggerated by their good friends, and we are counting on these regular installments, 52 of them every year. Do not fail to send in your subscriptions!"

Oh! suffer the day when the BULLETIN editor shall be sitting at his desk waiting for the arrival of these accounts of heroism for their stereotyped and regular insertion in a specific section of the SERVICE BULLETIN. The first few weeks after the inauguration of this plan, our people would turn to the paragraph of valor as one turns over the morning newspaper in search of the Gumps. But wouldn't it get tiresome after a while? Wouldn't you be disappointed if the 2,000 or so employees exclusive of the DO and Washington weaklings who never experience dangers in their work, or accomplish their aim in meritorious projects, be they verbal or written, furnish 52 glowing accounts every year? Fifty-two is a fairly high percentage of 2,000 for deeds worthy of special record.

Why not leave things as they are, except to give them a little more attention? How I enjoy reading every so often in a rather obscure section of our present good mimeograph of the hazardous trip of colleagues over the snowy crags and through the gaps with the mutilated body of Tom Jones, Ranger on the Carsonkit, or of the saving single-handed of the 21 families from the terrible fire on Mt. Mistgah, or of the daring pursuit and capture of the cattle thieves by Ranger Jackson. These isolated accounts of heroism and devotion to duty, as at present perhaps too slightly touched upon, mean more to "securing greater solidarity and additional pride in our work and ideals" than any premeditated scheme of weekly recording.

Allah! Oh, Allah! deliver us from this all too frequent bulleting of polished and carefully worded citations approved by a committee or board of representatives. 'Twould be like the distribution of the Croix de Guerre.

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OFFICIAL CLEANLINESS

By John B. Kirkpatrick, Allegheny

There must be an inherent trait in some persons that dictates that they try ever so hard if they would be cleanly. With others it is truly second nature to be neat and tidy.

From the observations of many, the conclusion must necessarily be arrived at that there are those in the Forest Service who either make little or no effort to be tidy, or else are not able to put forth the great effort required to bring about the desired end. Even in the National Forests of the East, which are so easy of access and so frequently visited by recreationists, some Forest Service employees have been so derelict as to keep and leave survey, examination, road and trail camps in a most unsightly condition. Still more of us are guilty of leaving our noon lunch spots strewn with papers, tin cans, and the like. Such actions on the part of a few members of the Forest Service make it most difficult for the Service as a whole to put across to the public the idea of keeping and leaving camp sites clean and sanitary.

It is but little worse for a Forest Service employee to be responsible for a forest fire than for him to leave in his wake a condition of untidiness. Let us endeavor to put all the Forests in the best possible condition, keep them that way and insist upon absolute cleanliness everywhere, in order that all may learn to respect their forest surroundings and themselves.

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CRUISING FOR MISTAKES

By M. C. Merrill, Washington

In your explorations into the literary forests of the Service you may occasionally come upon a stand of mistakes. Maybe it is an important or conspicuous stand, maybe only a lone 'lorn tree, or perchance a mere comma seedling growing out of place. Now the important thing to do is this: If the volume or size of the error justifies it, please report to PR, Washington Office, where a file is kept of the criticisms of each publication. Then when the need comes for reproduction of this particular species in the form of reprints or revisions, the advance growth information is at hand and corrections can be made accordingly. Will you kindly keep this procedure in mind? Thanks.

Of course the aim is to have no such obnoxious weeds in our written-word forests. But where there is such a big annual yield as is now the case in the Forest Service it must needs be that mistakes germinate. This is an appeal to use the grub hoe on them wherever found.

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ACTUAL PERFORMANCES AND NEWLY ESTABLISHED LIMITATIONS ON FUTURE

By Harry Irion, Washington

The Secretary of Agriculture has just approved a revised limitation of cut for the Forests in five Districts, which brings the authorized annual cut for all National Forests up to a total of 7,849,035 M. feet. Below is given by Districts such approved limitation, the total cut under sales during the calendar year 1923, and the per cent of the maximum now being cut:

District	Maximum Authorized Annual Cut M Feet B.M.	Actual Cut calendar Year 1923 M Feet B.M.	Per cent of maximum actually cut, Cal. year, 1923
1	668,000	124,783	18.7
2	391,905	98,613	25.2
3	280,720 (1)	66,508	23.7
4	557,310	46,578	8.4
5	1,260,600 (2)	268,458	21.3
6	3,833,000	362,768	9.5
7	94,500 (3)	42,482	45.0
8	763,000	44,845	5.9
Total	7,849,035	1,055,035	13.4

(1) Does not include an authorized annual cut of 173,400 cords of cordwood.

(2) Does not include an authorized annual cut of 19,230 cords of cordwood.

(3) Does not include chestnut which is being cut without limitation because of the blight.

These figures show that less than one-seventh of the maximum is at present cut. However, if Districts 6 and 8 are excepted, about one-fifth of the allowable cut was reached by the other Districts in 1923. Districts 6 and 8 contain 59 per cent of the total allowable cut for all National Forests. These two Districts report a cut in 1923 that is slightly less than 9 per cent of their authorized maximum. The comparatively high maximum for District 6 is due chiefly to the surplus growing stock in old mature timber, which maximum will be reduced to the normal annual increment when such surplus is removed.

In ten years the cut has more than doubled. Will that record be duplicated in the next ten years? Or, going a little farther into the future, will the cut under Service sales approach 5 billion feet 25 or 30 years from now? Surely here is a fertile field for speculation and one person's guess is as good as another's. May every prognosticator, prophesier, and revealer of the future unloose his imagination and figure this out.

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CAN THE ARMY AND THE FOREST SERVICE COOPERATE IN BREEDING SADDLE STOCK?

By Dana Parkinson, Wasatch

Mr. Headley asks in the SERVICE BULLETIN of April 7, "Who Wants a Government Horse?"

It is becoming more and more difficult to secure good saddle horses. The point raised as to good horsemen wanting animals of their own choosing would not effect a plan by which the Government raise its own horses. We have no difficulty now in trading off Government horses and there seems no logical reason why the Ranger could not continue this policy if his animal did not suit him.

The Fort Douglas Military Reservation joins the Wasatch Forest and I understand they are anxious to secure a Remount Station. It might be possible for District 4 to cooperate with them, carrying out the plan suggested by Mr. Headley.

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HOW FIRE PROTECTION COOPERATION FUNDS HAVE GROWN

(The Fiscal Agents' records show the following charges against deposits by private landowners to cover cost of protecting their lands from fire. This is exclusive of investigations, improvements and brush burning.)

By E. W. Kelley, Washington

District	1920	1921	1922	1923
1	$766	$14,470	$20,407	$19,335
2	182	169	...	211
3	1,654	1,528	2,386	2,413
4	737	964	1,548	1,967
5	41,376	41,398	57,731	65,597
6	9,217	39,158	40,626	38,936
7	95	42	49	27
8	..	..	..	..
Totals	54,027	97,729	122,747	128,486

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WASHINGTON NOTES

The New Grazing Manual: Forest officers will find the following method of indexing the new grazing manual a great help in finding quickly any particular regulation:

With a red or blue pencil draw a "box" around each regulation. This will cause it to stand out from the rest of the matter, making the regulation more readily picked out. Then with the same colored pencil number each right hand page in the upper right hand corner with the number of the regulation to which the matter refers.

You can then run over the leaves very rapidly and find the particular regulation and the following instructions with little delay.--W.C.B.

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Chaplineus Honoratus Est: Volume 22, Part 8, of Contributions from the U. S. National Herbarium (issued June 5, 1924) contains the original description of Pinaropappus parvus Blake sp. nov., based on Forest Service plant specimen No. 38663, collected in September, 1916, by W. R. Chapline on the Lincoln National Forest. This is not only the sole known collection of the species but adds a new genus to the flora of the United States. Candor compels us to add that this is a mighty homely little weed (of the Chicory-Dandelion group) though obviously peculiar and almost grasslike in appearance. This is the second of Mr. Chapline's botanical novelties to receive christening in "Contributions," the first being his very handsome and unique columbine (Aquilegia chaplinei Standley), based on F.S. No. 24906, also from the Lincoln (formerly Alamo), and published in Payson's Aquilegia monograph ("Contributions," Vol. 20, Part 4, 1918).--Daytonius.

SALVE, CHAPLINEUS !--Editoribus.

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FOREST PRODUCTS LABORATORY

Pulp and Paper Rod Mill Installed: That ponderous noise-maker, the rod mill in the Pulp and Paper Section, made its first practice revolutions recently under the admiring eyes of a score of paper makers, chemists, electrical engineers, power engineers, and other experts. When 3,000 pounds of four-foot steel rods, weighing 150 pounds each, roll within a manganese steel jacket, lined with over two tons of other metal, we might expect some noise - and there was some noise. Fortunately, unlike some of the other Pulp and Paper influences, it failed to seriously assail the sensibilities of workers in other parts of the Main Building. The new machine is for developing a method of efficiently refining raw or semi-cooked pulp; if the new process results successfully, large-sized material can be handled more satisfactorily and at lower cost.

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DISTRICT 1 - NORTHERN DISTRICT

June 11 Settlements: Within the National Forests of this District a total of 486,224 acres of National Forest land has to date been opened to agricultural settlement under the Act of June 11, 1906. Much of this land had now passed to patent, over 27,000 acres having been patented during the calendar year 1923.--H.G.A.

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New Drainage Maps: There are still many large areas in District 1 of which accurate drainage maps have not been made. Steady progress is being made, and during the past field season 568 square miles on the Selway and 360 square miles on the Flathead were covered. Relief was shown on these maps by 500 feet contour lines instead of by hachures as previously, resulting in a somewhat higher type map than is ordinarily attempted for drainage maps. It may be a long time before U.S.G.S. topographic maps are available, and until that time it is considered that these maps will serve very much better than the ordinary drainage map.

The work was largely accomplished by the plane-table method, supplemented by compass traverses and pacing. All features are located within 1/4 mile of their true positions. The cost of the completed maps varies from .8 cents to 1.5 cents per acre. A large area still remains unmapped on the Flathead Forest and on the Nezperce Forest.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Beating the Miner to It: The Medicine Bow Forest has been for some time in the throes of a platinum and gold excitement, more than 500 claims having been located, most of which are upon the seven-mile district in charge of Ranger E. J. Williams. Recently the miners decided to form an association for their mutual benefit in running matters affecting the district. Ranger Williams thought it a good plan to attend the meeting and seek the cooperation of the miners in fire prevention and at the same time, by making clear the Forest Service policy in selling timber, forestall any possible adverse criticism. As a result of Ranger Williams' talk at the first meeting, the constitution and by-laws of the Centennial Mining Association contains a provision that every member must help prevent and fight fires.

At a later meeting the association adopted a resolution for a clean-up day. In cooperation with Ranger Williams a day was set apart on which the rubbish and debris about the several camps was buried, burned or hauled away in an effort to reduce the fire danger around the buildings and to improve sanitary conditions.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Maybe the Cure is Worse than the Disease: For those who cannot remember how to spell "Albuquerque" the following may help: ALBUM plus ALL minus MALL plus QUERY plus EAR minus YEAR plus QUEEN plus CORE minus ENCORE leaves ALBUQUERQUE. (Tonto).

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Fire Maps: In a recent fire review appears a rather inadequate description of a new idea in maps devised and used by Ranger Frieborn of the Coronado. In addition to showing visibility zones from two lookouts, Frieborn's maps show areas of special hazard, areas too rough to be passable, water and trails. The whole layout in pocket form gives a fire guard or other Forest officer a big advantage over the usual fire map. After this season's tryout on the Coronado, it is possible that the Frieborn map may be officially adopted for use throughout the District.

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A Fitting Explanation for Many D-3 Clouds: An optimist touring through Arkansas met a sad-looking farmer.

"Why so blue?" said the optimist.

"Blue? I should say I am. The whole country is going to 'shucks.' Had no rain for months, mortgage is due, can't pay the interest, crops burning up and the cattle are dying of thirst."

"Why, my good man," said the optimist, "look back of you, gaze to the East; see that beautiful big bank of clouds coming your way? You're going to have a good old-fashioned rainstorm."

The farmer looked around and said:

"Rain, hell, them's just the empties coming back from Ohio."

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Lightning Zones: It is brought to our attention on the Payette that lightning may strike in different places in an extremely dry season more than during a normal season. It is a well-known scientific fact that the electricity in the earth is conducted through moist, but not through dry earth. That is, that dry earth is not a conductor of electricity, or is a poor conductor at the best. The negative electricity in the ground and the positive electricity in the clouds have an attraction for each other which, other things being equal, should result in the negative electricity concentrating in the highest points, or the points closest to the clouds, and the stroke normally should be between the positive and the negative electricity at such points.

In an extremely dry season, Supervisor Mains suggests the earth may become too dry in most places to serve as a conductor of electricity; that the negative electricity in the earth will concentrate only in the moist areas which are in the proximity of the streams and springs, and that it will be in these localities where we can expect lightning to strike under such conditions.

These observations seem scientifically sound, and Forest officers will doubtless be interested in checking up on them should this be an abnormally dry season, and should any considerable number of electrical storms occur.

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DISTRICT 5 - CALIFORNIA DISTRICT

Another Brush-Burning Experiment: Ranger A. W. Bramhall of the Big Valley district on the Modoc, is trying out the experiment of having his timber-sale permittees (fuelwood) burn brush as cutting progresses.

As soon as a tree is felled, a fire is started and as the brush is lopped it is thrown on the fire. So far excellent results have been secured. Wood cutters are well satisfied with the method as it involves no more work than proper piling. It is also of big advantage to the wood cutters as everything is cleared out of the way of the drag saw and for wood piling.

Considerable difficulty has been experienced in the past on fuelwood operations in getting brush properly piled. Room is needed for ricking up the wood and for getting around the piles with wagons. In some instances there seemed to be no place to pile brush but in reproduction. The practice has been to cut a large amount of wood in the late fall, winter or early spring and then let it dry out until the following summer or early fall before it is hauled. We hope to encourage more winter cutting and I believe, in view of past burning difficulties, that it would be perfectly proper to make current burning by permittees a contract requirement. Obviously the method is only applicable to late fall, winter or early spring cutting.--G.W.L.

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A Good Cooperator: The Automobile Club of Southern California has issued a complete set of our Forest Recreation write-ups for public distribution. They are attractively gotten up on colored paper and give credit to the Forest Service.

The club has also issued a set of recreation maps covering the Forests. These maps show all the main recreation features and should prove very useful to the camping public.

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Use Your Bean When You Use Your Camera: The season for the taking of photographs with riderless horses and driverless automobiles in the scene is at hand. A review of the District office collection indicates that in past years there were a whale of a lot of good horses, all saddled and everything, wandering around the National Forests at large, to say nothing of automobiles peacefully reposing in the "quiet solitude" of the mountains without a human being in sight. Good photographs don't just happen. In other words, "use your bean" before you snap your camera.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Infestations in District 6: Results of the second annual pine beetle survey in the yellow pine of Klamath and Lake counties in Southern Oregon have just been distributed. This annual survey covers the pine timber in Klamath and Lake counties outside of the area covered by the control project. The more important statistical data are as follows:

Commercial yellow pine acreage	2,500,000 acres
Commercial yellow pine volume	17,500,000 M bd.ft.
1921 pine beetle loss (D. brevicomis)	40,000 " " "
1922 pine beetle loss (D. brevicomis)	41,000 " " "

Annual beetle loss equivalent to about 1/4 of one per cent of yellow pine volume.

The survey revealed a body of about 60,000 acres of yellow pine in the southern part of the Deschutes Forest which is apparently in need of control operations against the western pine beetle.

On the remainder of the survey area, the beetle situation was not found to be a disturbing one at the time of the last survey in October and November, 1923.--A.J.J.

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Sales Notes: At the present time a total of nearly one-half a billion feet of timber is being advertised in three large sales in D-6. Three hundred and seventy-five million feet on the Herman Creek unit, Umpqua National Forest; 77,500,000 feet on the Humbug Creek unit on the Santiam Forest; and 38,500,000 feet on the Powwatka Ridge unit on the Wallowa National Forest.--F.E.A.

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Jackson Honored: On March 5 the U. S. Geographic Board approved the change of the name of Bear Creek or South Fork of South Umpqua River, within the Umpqua National Forest, to Jackson Creek, in honor of C. W. Jackson, for many years ranger and scaler on the Umpqua Forest, who was killed in 1923 while driving a truck on the Colville Forest.

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DISTRICT 7 - EASTERN DISTRICT

Editors Visit the Wichita: The tourist season opened on the Wichita on May 25th with a buffalo barbecue to 300 visiting editors, members of the National Editorial Association. The barbecue was financed by the Lawton Chamber of Commerce. An actual count indicated that there were 11,365 visitors in the Forest on this day.

That the Wichita National Forest and Game Preserve under the direction of Supervisor S. M. Shanklin has been well sold to the people of southwestern Oklahoma is evidenced by the following excerpts from a letter addressed to Mr. Shanklin a few days ago by the Lawton Chamber of Commerce:

"By direction of the Chamber of Commerce we extend our thanks to you and through you to your force for their assistance in entertaining the National Editorial Association. * * * * * We wish to commend the spirit of yourself and your deputies for their willingness to cooperate with the Chamber in entertaining our guests. * * * * * We cannot too highly compliment you for the part you played in the game. * * * * The National Forest is one of the biggest of Lawton's assets. We hope to make more use of it in the future than we have in the past. With your assistance we will be able to give it more publicity and make it more of a recreation area not only for the people of Lawton and vicinity but for the people of southwest Oklahoma and north Texas. * * * * * Any time the Chamber of Commerce can be of service to you we are more than anxious to do so."

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Big Game Animals on View: An 80-acre exhibition pasture has been constructed on the Wichita, and buffalo, elk, deer, and antelope will at all times be in view of the main thoroughfare leading through the Forest. The fencing used in the construction of this pasture was donated by the Kitselman Bros., Muncie, Ind., who furnished wire for the construction of the 8,000-acre buffalo pasture.

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

Vol. VIII, No. 26. Washington, D. C. June 30, 1924.

THE OUNCE THAT MASQUERADED AS A POUND

By James E. Scott, D-7

Chart 2 on Page 5 of the SERVICE BULLETIN for May 19 purports to show where our money goes. It shows a nice balance between expenditures for "Fire Prevention" and "Fire Suppression." If we had attained the ideal in protecting the National Forests from fire, I can imagine that of our fire protection dollar some 50 cents would be used for fire prevention and 50 cents for suppressing the fires we could not prevent. This chart would seem to tell the stranger that we use our money now something like this.

Is it not a fact that this expenditure labeled "Fire Prevention" is prevention only to the extent that the existence of a protective organization in itself serves as a deterrent to carelessness, wilfulness or maliciousness; plus the unknown, incidental "PR" expenditures in time and money? The great bulk of it is "Detection and Suppression Expense," preventing no fires from starting, though preventing, I grant, many A's from becoming C's.

Should we not get into line with every other organization in the country which has a fire problem on its hands and call the major divisions of our problem by their right names? "Fire Prevention" should mean "expenditures of time and money and the methods and measures used to prevent the occurrence of fires." We should know what we are spending on this, where it is spent, and how.

The rest of the cost, and this includes the cost of our protection organization and equipment except to the extent that they are used in actual "prevention" as defined above, should be charged to "Fire Detection and Suppression," or some other caption which truly expresses the purpose of the expenditure. "Fire Suppression" in the chart presumably covers only the direct suppression costs. Continue to keep this separate if necessary or desirable, but why label everything else "Prevention?"

Were the Service to spend efficiently a reasonable sum on real "Prevention" the rest of the fire job should steadily become less difficult and less expensive until we approach an irreducible minimum. It is difficult, of course, perhaps impossible, to prove this proposition in advance of a real trial, or without the risk of a real test investment. I doubt if we have had either of these to date, but sometimes it does seem to me that we have bought an awful lot of axes and shovels.

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LET'S STICK TO FACTS

By F. E. Bonner, D-5

Much of this controversy as to the why of a 9 ft. road is amusing but at the same time misleading through loose handling of facts.

I have in mind particularly an article in the March 3 issue of the SERVICE BULLETIN by Evan Kelley quoting in part from an article in the Engineering News Record of January 17, which presents some highway accident statistics of the Wisconsin State Highway Commission. These statistics indicate, according to Mr. Kelley's reasoning, that narrow roads are no more unsafe than wide straight roads. Such inference is entirely unfounded as plainly outlined in Highway Commission explanation accompanying the statistics.

The article clearly points out that although there were three times as many accidents on straight roads as there were on curves and railway crossings combined, it does not follow that the straight road is less safe. The answer is simply that the great majority of the mileage and concentration of traffic is on straight roads. In the analysis the article goes further and shows that in 1923, considering relative mileage, the occurrence of fatal accidents at railway crossings was 407 times more numerous than at other locations.

It is logical to expect that careful statistics would show narrow road to be a similarly prolific source of accidents. The endeavor to argue away the inherent danger of a mountain road as narrow as 9 ft. appeals to me about as ineffectual as the misguided attempt of the rural Kansas legislator to have the legal value of Pi simplified by changing from 3.14159 + to 3.0.

There do exist some places, I know, where the lack of traffic and the physical obstacles to construction warrant the Forest Service adopting a 9 ft. or less width in its road building. The users of such roads simply must reconcile themselves to the dangers and slow travel of such roads because the economics of the situation will not warrant anything better. However, these situations are few. In my judgment we are fully justified in providing more than a 9 ft. width on the larger part of the Forest roads. This is particularly true where the traffic amounts to something more than an occasional vehicle or where the construction difficulties are light. Nothing is more ridiculous and expressive of amateur road building than close restriction of width through level or gently sloping country where the cost of a greater width is practically nothing.

There have been specious arguments advanced that since a 9 ft. width allows one-way travel, greater width is unnecessary unless a double track road be provided. Why is it then that 14 ft. width, which allows passage of two vehicles is not wide enough for the double track road? Are the States and other agencies extravagant in providing highways 16, 18, 24 or even 30 ft. wide? The public don't seem to think so or the trend to greater widths would have stopped long ago. It is merely that increased width promotes safety, convenience and speed. One of the main values of an improved road is the greater speed with which it may be traversed with safety. Obviously traffic moves faster over a 12 ft. road than over one of 9 ft. width.

Isn't this the object of our whole road improvement program - to speed up transportation? If no one is in a hurry let's quit this road business and get back to the 2½ mile an hour trail.

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Editor's Note.--Several articles on the road question are in my hands and may see the light of day. But I believe that unless some new angles are to be presented the road argument should soon end as far as the SERVICE BULLETIN is concerned. The entire discussion has been very much worth while.--M.H.

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CAPTIOUS, CARPING, CAVILING COMMENT

By Clarke F. Hunn, Washington

> "He only does it to annoy,
> Because he knows it teases."
> ---Lewis Carroll

Messrs. Gill and Headley's joint contribution to the SERVICE BULLETIN anent citations has aroused in me a considerable amount of unintelligent interest. With much to learn about the Service, I have many times wished that there were some single compilation of forest facts and fancies which I could refer to easily and quickly. Many who know forests and foresters better than I doubtless would treasure a composite personal history of the last twenty or thirty years. Perhaps a system of citations will evolve this very thing in as perfect a form as one could reasonably hope for.

And yet I am inclined to wonder if this is, perhaps, one of the things that we had better be wistful for than satiated with? It seems to me that I have already seen this thing tried out in other fields. It is always carried out with enthusiasm: first with a joyful enthusiasm, then with a dutiful enthusiasm, then with a dogged enthusiasm. It's a sort of bonus bill. To decry it herds one with the slackers, the unappreciative, the callous and coldblooded. But I can't resist hurling at the BULLETIN Editor one philosophical statistic, even if he never prints it, and even if I can't produce a single datum to back it up:

Ninety-nine per cent of the men and women who do good work just for their own satisfaction in doing good work will do the same good work for public esteem or for extra pay. But one per cent or so---maybe only 0.001%, after all---will not. That one man or woman in a hundred thousand will quietly pack up and unostentatiously slip across the horizon. When we all understand why, there won't be any bonus bill, nor any friendly, informal citations in the SERVICE BULLETIN.

Emerson backs me up on this, but I'll have to leave it to the BULLETIN Editor to locate the quotation. (I'm taking your Emerson thing for granted.--Ed.) And, meanwhile, during that tedious interval while we're all waiting for the millenium to roll around to us, the ninety-nine will be glad of recognition and the other fellow won't care. So let's go to it!

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EXTENSION OF THE RANGE OF BIGTREE

By S. B. Show, D-5

Back in the dark ages of 1912 and thereabouts, various small plantations of bigtree were set out in different parts of California, were watched for a few years and then forgotten. Recent examinations of a few are exceedingly interesting in showing the great adaptability of this species, which has such a restricted natural range.

One small plantation on a cut-over area on the Klamath within a few miles of the Oregon line, shows 65 per cent of the planted trees alive. The tallest ones in 1922 were about 8 feet high and outstripped yellow and sugar pine in height growth on the area. This plot is on land fairly typical of much of the mixed forest of northern California.

Farther south on the Tahoe a plot of 5 acres was set out in 1912. This was on a burn, and the young trees have been forced to compete with established brush cover. This spring it was found that the best trees were from 4 - 8 feet high, and were successfully overtopping the brush. Many others are only 1½ - 2 feet high, but are persisting and should finally win their way to the light.

The farthest south record is of a plot on the Sequoia on which seed was sown in 1911. The area had been recently burned, and the seed was old, but in 1922 trees were found from 1½ - 5 feet in height.

These small items of success in establishing this supposedly fastidious species under rather difficult conditions are of more than passing interest. We may yet see bigtree one of the widely distributed timber trees in the Sierras.

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FOREST PRODUCTS LABORATORY

Paint Study of Help in Field Service: The purchase and use of suitable paints has always been one of the improvement problems of the Forest Service. It is interesting to us, therefore, that the Laboratory has been able to provide useful suggestions in this field.

Of a report on the use of paint, the Southwestern District writes, "We have found in issuing our paint bids this year that the information in the report is of material value - and this year we are trying the plan outlined in the report and hope to secure better results."

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Forthcoming Forestry Books; Among the books in preparation by the Institute for Research in Land Economics and Public Utilities, located at the University of Wisconsin, is one by H. S. Graves, "Economics of Forest Land," and another by C. R. Chambers on "Farm and Forest Land Values."

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Laboratory Furnishes Material for Better Packing Campaign: The results of laboratory investigations on strapping of wooden boxes are featured in an extensive campaign for better packing being conducted this month by the Freight Claim Prevention Department of the American Railway Association.

This campaign is especially to promote the increased use of metal bindings on shipping containers.

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FOREST EXPERIMENT STATIONS

Youthful Regeneration of Jack Pine: A 6-year-old stand of jack pine reproduction in northwestern Wisconsin, after having been very thoroughly burned, successfully reproduced itself from seed. The present 4-year-old stand of reproduction on this area of over 100 acres, while not as dense as the former stand of reproduction, nevertheless has fully restocked the area averaging 1,300 trees to an acre.

The fire-killed jack pine, 6 years old and as many feet high, lying thickly on the ground gives evidence of the former growth; and opened cones on the branches of the little dead trees indicate the source of the seed for the new stand of reproduction. Fire has difficulty in eliminating jack pine from its Lake States range, as this remarkable demonstration of its reproductive capacity will bear witness, but in spite of its tenacity of existence fire has stripped it from many square miles in the Lake States, resulting in the well-known "barrens" of the region.

And this stand of reproduction 4 years old which sprang from the seed of the 6-year-old stand, is this year ripening its first crop of well-formed cones.--A.E.W., Lake State.

DISTRICT 1 - NORTHERN DISTRICT

Hot Stuff: One of the requisitions submitted by the Clearwater Forest for men to be employed on improvement work stated: "1 trail laborer for work through 1910 burn in a narrow canyon where heat is severe. It is a job for a man who is able and willing to work where thermometer regularly registers above 100° in the shade and where no shade is to be had."

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Mr. Kelley Please Note: Certain of our friends have been known to voice the opinion that fires just simply won't burn in Colorado. We have never agreed to this, and every now and then we are able much to our regret to offer evidence that given lack of rainfall, low humidity and high wind mixed in the right proportions fires will burn as far and as fast here as anywhere.

On June 18, careless campers (who evidently had not been reached with the gospel during Forest Protection Week) left a smouldering camp fire near the mouth of Jim Creek along the Berthoud Pass highway on the Arapaho. With the relative humidity at noon of 8 as against an average normal for June of 34, a terrific wind came up early in the afternoon and despite the fact that three Forest officers jumped on the fire almost as soon as it started, it went into the crowns and burned over 2,500 acres of lodgepole pine in three and a half hours.

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Round-up of Renegade Horses: A bunch of renegade horses which have been trespassing on the Leadville National Forest for the past three years were taken into custody upon judgment secured in the U. S. District Court, and 41 head sold for $466. Expenses incurred totaled $202, leaving a net of $264. The trespass fees amounted to $304.

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Range Conditions in D-2: Although some of the higher ranges in D-2 are a little later than usual and livestock, especially sheep, may be slightly delayed in reaching their allotments, excellent feed conditions have obtained outside the forests in the foothill regions and we are anticipating a very favorable grazing year throughout practically all the District. Field inspections show excellent progress is being made by Forest Supervisors in better controlling the early use of the ranges. It is gratifying to note the beneficial results to the ranges which are already being recorded.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Zuni Mountain Addition: The Secretary of the Interior has concurred in recommending to the President the addition of 314,900 acres of land lying between Mt. Sedgwick and Fort Wingate units of the Manzano forest. The record of the Interior Department shows that 98% of this area is patented, about 2,000 acres covered by unperfected entries and 2,758 acres of unappropriated public lands. The inclusion of this region within the forest boundary will enable the owners of private timbered lands to avail themselves of the provisions of the general land exchange act.

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New National Monument Has a Fire: Hardly can a thing spring into prominenc before destructive influences begin. The Coronado Bulletin reports a 160-acre fire in the new Chiricahua National Monument.

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An Interesting Status Tangle: Many years ago patent issued to 160 acres of land near Glorieta on the Santa Fe. The land changed hands three times and finally was reconveyed to the United States as base for a lieu selection. The county officers missed the conveyance to the United States, assessed taxes, sold the land for nonpayment and gave a tax deed. Just to be safe the purchaser brought suit to quiet title in the State court and got a decree that apparently made all safe. Then the land was sold, the purchaser put in a road, surveyed the tract into lots, sold four of them, started to build a cabin and was met with a letter from the Ranger, why this trespass? He loses his time but gets his money back from the man who took the tax title and the Government is satisfied.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Indian Forester Visits Office: Mr. S. N. Kaul, a Hindu forester, was an office visitor recently. Mr. Kaul is traveling in the United States to broaden his outlook in forestry matters and is visiting a number of the western Districts. Although interested in all phases of forestry, he was particularly impressed with the grazing administration as exemplified in the Intermountain District and discussed range management, grazing studies and administration at considerable length. He states that in India the livestock industry upon the forests is entirely unorganized, each man doing as he pleases and many of the evils suffered in this country previous to the creation of the National Forests are becoming more and more noticeable in that land.

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Cooperation: State Game Warden R. E. Thomas has sent a bulletin to all Assistant Chiefs and Deputy Game Wardens throughout Idaho, requesting them to assist the Forest Service in every way possible during the coming season in the protection of forests from fire. We have had excellent cooperation in the past from the Game Department, and we appreciate Mr. Thomas' thoughtfulness in again calling the matter to the attention of all his men.

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DISTRICT 5 - CALIFORNIA DISTRICT

Forester Shinn Says Au Revoir To His Newspaper Friends: Dear Editor: As I am now past the Civil Service age limit, and will soon retire from the Forest Service, I wish to thank you with all my heart for your years of good fellowship and your deep interest in the National Forests. I have read your paper with a growing realization of its value to the region which you unselfishly serve.

The District Forest Office in San Francisco will hereafter send out, with other matter, much of the same sort of copy as I have been giving you, but by younger men - though now and then I may find time for a word of good will.

Stay with the Forests - study them, meet their officers, travel over them, and if you can, have a newspaper men's convention in Yosemite Valley before long, with one day devoted to the National Forests.

Always your friend,

CHARLES H. SHINN,
Forest Examiner.

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Big Pines: On April 18 Boulden, Woodbury and Barrett measured a yellow pine tree in Hall Canyon on the San Jacinto District, Cleveland Forest, that is believed to be the largest tree of this kind in southern California. The tree measures 7 feet, 3 inches in diameter B. H., and is 165 feet high.

On May 14 Jones and Barrett measured a Jeffrey pine tree near Mammoth which is believed to be the largest of its species on the Inyo. This tree measured 7 feet, 4 inches diameter B.H., and was originally over 160 feet high but the top was broken out of it by the high wind of February, 1923. This Jeffrey pine is almost exactly the same measurements as the big yellow pine on the Cleveland Forest but is not so symmetrical a tree.

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Noted Visitors on Santa Barbara: Mr. and Mrs. William Gibbs McAdoo recently passed a few days on the Santa Ynez River, at the Dwight Murphy Lodge. Fishing the trout pools of the river was the pastime of both. The Presidential candidate hooked some fine trout, it is said. During their stay the McAdoos were guests of Forest Supervisor Jordan on the Santa Barbara National Forest.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Another Bull's Eye: Deputy Supervisor Treen has placed a section of a tree 565 years old on exhibition at Pioneer Square in Seattle near the famous Totem Pole, with a chronological table showing historical events that happened during the life of the tree and a sign requesting help in the prevention of forest fires. This exhibit will remain there all summer and should be a great help in teaching the public care with fire in the woods. It attracts considerable attention.--M.W.P.

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District 6 Leads the Districts in Timber Cut: A comparison of timber sale statistics for the past year shows that District 6 leads all the other Districts in the amount of the cut under commercial sales with 359,176 M ft. B. M., and is second to District 5 in the amount of its timber sale receipts with $703,464.

District 6 takes sixth place in the average price of stumpage cut under commercial sales with $2.14 per M, but when it is remembered that much of the cut is of low-priced Douglas fir stumpage, the average is not so bad as compared with the Districts whose cut is principally of the high valued pines.--T.T.M.

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DISTRICT 7 - EASTERN DISTRICT

Antelope Herd In Good Shape: About three years ago the American Bison Society passed around the hat to make possible the establishment of a band of antelope on the Wichita National Forest and Game Preserve. The total amount of the funds was $3,616, which has all been expended on this project by the American Bison Society. The herd has had a varied career. In the fall of 1921 ten antelope were received and six died from an unknown cause. In the fall of 1922 additional antelope were shipped and five were lost from some cause which has not been determined. This brought the herd down five head in the spring of 1923. Of the first five head two were bucks and three were does. Fortunately each doe gave birth to twins so that the herd was immediately increased to 11 head. Again this spring the three does had twins and our $3,600 herd now totals 17 head of thrifty antelope. It is hoped that the animals have become acclimated and that the donors will have the satisfaction of knowing that they have restored to its natural haunt one of the most beautiful and interesting forms of animal life on the American continent.

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Boy Scout Exhibit: Forest Clerk Eunice L. Brown of the Arkansas National Forest and the County Agricultural and Home Economics Agents of Garland County are cooperating with the Chief Boy Scout Executive of Hot Springs in arranging a special exhibit in a temporarily vacant store building on Hot Springs' principal thoroughfare. The exhibit is designed to demonstrate all phases of the boy scout work, including the boys' and girls' agricultural club work and forest protection.

In commenting on the exhibit the Sentinel-Record of Hot Springs says: "This exhibition as a whole is of the greatest importance to every citizen of Garland County because it means the practical training of our boys and girls, the citizens of tomorrow."

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DISTRICT 8 - ALASKA DISTRICT

Getting Their Goats: Naturally, there are no mountain goats on the islands of southeastern Alaska, while the adjacent mainland is well supplied. When the Alaska legislature of 1923 was considering the passage of a bill for the introduction of deer in the Prince William Sound region, an amendment was attached appropriating money for the introduction of mountain goats on Baranof and Chichagof Islands.

The bill was passed and last fall a contract was let for 18 head of these animals to be delivered to Sitka, the contract price being $285 per head. Three Finlanders undertook the job and up to April 1, 1924, 13 goats had been delivered.

As the goats range in extremely rough country, the work is attended by some risk, and on March 24 one of the party, a man about 30 years of age, slipped from a ledge, fell, and slid about 125 feet to the bottom of a ravine. When picked up by his companions the man was unconscious but was soon able, with some assistance, to walk back to the beach. The weather was too rough for the boat to proceed to Juneau for medical assistance and the man died early the next morning, about 17 hours after the accident happened. As soon as the weather would permit the body was taken to Juneau and an examination proved that the skull was fractured, besides other injuries to the body and limbs. The other two men voiced their intention of returning to the vicinity of Sundum and continuing the work until the contract has been filled.

This is not the first attempt that has been made to transplant goats on these islands. A few years ago the Boone & Crockett Club, a sportsmen's organization of New York, placed a small sum of money in the hands of the Biological Survey to be used for this same purpose but the price was limited to $180 per head, which proved to be inadequate, and after one billy had been liberated on Admiralty Island the work was given up. It is reported that this animal was killed by an Indian shortly after being liberated.

Various methods have been tried in capturing these animals but the most successful seems to be to run them down on snowshoes and lasso them in the drifts. Trap corrals have also been used to some advantage by blocking their runways with fish netting.--H.E.S., Tongass.

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HOW THE MOTHER TONGUE GROWS

The following mavericks have been observed ranging in official correspondence. The owners will please remove them since Mr. Webster has issued no permit for this kind of stock: Postmorteming, uncooperative, uncheckdamned.

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HAND SPEEDERS VS. GASOLINE CARS IN RAILROAD FOREST FIRE PATROL

In the State of Minnesota considerable attention has been given to the patrol of right-of-way following trains. Some rather interesting observations have been made as the result of the patrol inaugurated by the several railroads in that State. The comparative chart shows that the average distance effectively covered by a gas car is 26.8 miles, while that covered by a hand speeder is 10.5 miles. The State has concluded that a patrol beat should not be longer than 20 miles. One gas car is found to be superior to two or three hand speeders for patrol purposes.--C.R.T.

BRUSH BURNING PERMITS IN MASSACHUSETTS

An indication of fire hazard in the more densely populated States is brought to mind by a paragraph in a report of the Massachusetts State Forester, recently submitted. During the calendar year 1923, 42,000 permits were issued throughout the State for the burning of brush. Had there been no State law requiring the securing of such permits, the number and extent of forest fires in the State of Massachusetts during the year, which was exceptionally dry at times, would doubtless have increased many fold. The advisability of such laws in any State is clearly indicated.--C.R.T.

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A FOREST POLICY IN MONTANA

As the owner of 500,000 acres of timberland, which it is endeavoring to operate with the maximum efficiency and benefit to the citizens of the State, Montana has evolved a forest policy, stated by Forester R. P. McLaughlin as follows:

> It is, and should be the policy of the Montana State Forest Department to adhere closely to the following propositions:
>
> 1. To withhold its timber from sale, rather than to force it upon the market.
>
> 2. When the sale of its timber is made, to manage the timber cutting and brush disposal in a manner to leave the nucleus of a new crop upon the ground.
>
> 3. To reforest such areas of State forests as are accidentally, or unwisely denuded of their timber.
>
> 4. To encourage reforestation, and to aid in the protection of all timber lands of the State.
>
> 5. To preserve the landscape beauties of important recreational points of the State forests.
>
> 6. To extend the State forests and consolidate the State forests by acquisition and exchanges.

State Forest timber, says Mr. McLaughlin, should not be forced upon the market. Landscape has intrinsic value and that value must be reckoned with hereafter in all commercial enterprises involving the use of the public forests.

Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

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UNIVERSAL VOLUME TABLES FOR MEASURING STANDING TIMBER

By S. T. Dana, Northeastern Forest Exp. Station

Work in progress at the Northeastern Forest Experiment Station, Amherst, Mass., indicates that it may be possible to use a single set of tables to measure the contents of standing timber of most softwood species without regard to location or size with less chance of error than with existing tables for individual species in specific regions.

Foresters and timberland owners are continually confronted with the problem of finding suitable tables to measure the volume of their standing timber and to aid in determining the growth which may be expected over a period of years. In the past such tables have been made up by averaging the measured contents of a number of trees of the given species in a given region, but because of the great number of variables affecting the volume of trees, tables constructed in this manner usually proved of doubtful accuracy when applied in other sections, and have therefore been little used. These tables showed the average volume for trees of different diameters and heights, but took no account of the rate of taper or form of the trees which might make the volume of trees of the same diameter and height vary as much as forty per cent.

For a number of years a system which recognizes this factor of form has been used with satisfaction quite generally in Sweden. The work at the Northeastern Forest Experiment Station follows the general principles of the Swedish system, but has developed along original lines in many respects. It is a continuation of studies originated at the University of Idaho by C. Edward Behre, now a member of the station staff.

It has been found that trees of all species taper in accordance with the same law, probably in response to the mechanical stimulus exerted by the wind on the crowns, and therefore a mathematical expression of this law of taper should apply to all species with equal accuracy. The Swedish system is based on such a mathematical formula, but this has not proved satisfactory when applied to our species. Measurements of many hundreds of trees of fourteen different species have been analyzed, and as a result a new formula has been developed which appears to express very satisfactorily the diameter at any point on the stem for most coniferous species without regard to size. This formula may be used as the basis for computing tables of volume in terms of any unit of product or standard of utilization, without the necessity of any field work at all.

To apply these tables, which show the contents for trees of different diameters, heights, and rates of taper, it is necessary to know the relation of the diameter inside bark to the diameter outside bark, which is usually measured in the field, and also the average form or rate of taper of the stand to be measured. Methods of estimating the latter are still under investigation, but it seems reasonably certain that a little practice will enable anyone to ascertain the form class to which the stand should be assigned very readily by measurement of a few trees or by estimation, according to the density of the timber and the height and character of the tree crowns.

The diameter used in measuring standing timber is taken at breast height or 4½ feet from the ground. In most species the flare of the trunk at the butt extends up past this breast height point in the larger sizes and distorts the diameter from the normal, as indicated by the general taper of the main portion of the stem. It is believed that this distortion of the breast height diameter by root swell is the principal cause of differences in taper between trees of different species or sizes. The use of the universal tables based on a mathematical formula presupposes the elimination of this distortion, and it is therefore necessary in applying these tables to any species to make a study not only of the bark thickness but also of this root swell in order to get the proper relationship between the "normal" diameter inside bark and the diameter outside bark which will be measured in the field.

With these two factors taken into account, the tables based on the formula which has been developed should give very dependable results for practically all softwoods and possibly hardwoods as well. The species which these universal tables have been found to measure satisfactorily thus far include western yellow pine, western white pine, Douglas fir, lodgepole pine, white, red, and black spruce, eastern white pine, red pine, balsam fir, Scotch pine, Norway spruce, European and Siberian larch, and gray birch. The only species investigated which appears to differ in form from the general equation enough to warrant the construction of separate tables is eastern hemlock.

The development of universal volume and taper tables of this sort will go far in aiding foresters and timberland owners to handle their holdings intelligently and will greatly reduce the amount of field work and computation which is now needed to compile dependable tables for any locality.

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DOES FIRE CONTROL NEED CONTROL?

By Roy Headley, Washington

In the free-for-all which occurs every now and then in the Washington office, some men stoutly assert that fire control is hogging the right of way; that unwarranted sums are being spent on it; and that field men have been led to think of fire control as an end in itself instead of as a means of producing the most timber of the greatest use value.

It is undoubtedly true that some protected areas will produce more timber values than other areas of equal size. The trouble is that when we reduce prevention expenditures below a certain mimimum, both suppression expenditures and acres burned are likely to go up unreasonably. The question is whether protection costs are above that minimum on any areas of low productive value; also whether protection costs can be cut in any way and the savings applied to other lines of work, with some net advantages in attaining general Service objectives.

Discussion is invited.

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WASHINGTON NOTES

The report for the fiscal year 1924 by the librarian of the Washington photograph collection shows that during the past year 1,467 photographs were added to this collection. The total of photo prints now filed in Washington is 50,328.

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On June 18 Secretary Wallace approved road construction programs for the following nine States representing a total of 275 miles of road construction at an estimated cost of $1,433,695, Forest Highway Funds, as follows:

Colorado	25 miles	$247,000
Montana	36 "	375,000
Minnesota	34 "	35,000
Nevada	16 "	44,148
New Mexico	36 "	160,000
North Carolina	22 "	15,000
Oregon	54 "	385,400
South Dakota	3 "	28,084
Wyoming	49 "	144,063
Total	275 "	$1,433,695

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FOREST PRODUCTS LABORATORY

Helping the Newspaper Reader: Almost a ton of ground wood pulp stored in a very moist atmosphere, and in various stages of decay, is evidence of a lab. study that helps out the newspaper readers and reduces the pulpwood cut from the forests.

At present thousands of tons of pulp are lost annually through decay, much of which is entirely preventable through proper care and spraying with various chemicals.

Already sodium fluoride has been found successful in preventing fungous attacks, and now a cymene (crude spruce turpentine) treatment developed recently at the laboratory and combined with sodium fluoride has been found to be of even greater value. An advantage of the cymene treatment is that this chemical is a by-product of the sulphite pulping process.

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Wooden Shoe Pegs Still Made: Wooden shoe pegs, once in general use here, are now made by only one mill, and practically all the pegs are shipped to foreign countries. About 95 per cent of the raw material is white or paper birch, and 5 per cent is yellow birch; most of the birch used is obtained from the White Mountain National Forest.

In manufacturing these pegs, among the smallest articles known to be made of wood, one cord of bolts six inches in diameter produces 44 million pegs 1/16 x 1/16 x 9/16 inch. In spite of the small size of this product, there is a waste of from 25 to 50 per cent in the process of manufacture.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Fire Situation in D-2: General rains around the first of June relieved the fire situation in the Lake States and it is thought that since the grass and tree foliage is now well along, it is unlikely we should have further serious trouble this spring.

The season opened about three weeks late and the forest floor was extremely dry and inflammable. There was an unusual lack of precipitation and lakes on the forest and along the Canadian boundary are about three feet below normal. Strong north and northwest winds prevailed. The situation was critical for about two weeks and a great deal of damage occurred in the northern part of Minnesota from fires in the vicinity of the National Forests. Drifting smoke put our lookouts out of commission a large part of the time. Some emergency patrol was necessitated.

The worst fire in the Lake States occurred on the Minnesota and was caused by the Great Northern Railway. Some thousand acres of Norway reproduction was destroyed and the question of settlement of damages is under way. The cost of suppression, probably $1,200 to $1,500, was borne direct by the railroad company.

As a result of this fire and conferences with the General Superintendent, the General Claim Agent and the Vice President's office, the indications are good that about fifteen miles of fire lines will be constructed which will almost surely eliminate railroad fire danger in the Forest.

One fire covered some 2,500 acres in the hardwood region on the Minnesota, but little loss occurred other than a young stand of popple.

No large acreages were burned on the Superior Forest, and damage and cost there is nominal this year so far.

The Michigan had the heaviest loss of recent years when about 600 acres of jack pine reproduction burned in a fire which extended over 2,000 acres.

Suppression costs were split 50-50 with the State and not much expenditure was involved.

The western part of the district is quiet and general rains prevail. In the Rocky Mountains snow has not yet disappeared in the timber.--H.McL.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Hand Picked Appeals for Fire Prevention: The Datil this year is not overlooking any opportunities for forewarning all the possible fire hazards that can be reached. Personal letters with follow-ups were sent to truck drivers, freighters and others who move about and are, in consequence, sources of danger. A copy of the "first" letters shows the manner of handling.

"Dear Mr.________: The Datil Forest is again facing its Annual Fire Season. Even with the present favorable conditions, we have had four fires to date. Last season we had a total of 68 fires; 44 were caused by lightning and were unpreventable; 24 were man-caused and, therefore, preventable. Careless smokers were responsible for the greatest number of man-caused fires with 12; campers were second with 10, and carelessness with brush burning added two to the list. At least two of the careless smokers' fires were traceable to truck drivers dropping "tailor-made" cigarette butts beside the road. The annual wool clip is again in course of movement marketward and trucking will be unusually heavy for the next few weeks; in view of this fact we would like to ask you to cooperate with us in preventing man-caused fires to the extent of instructing your drivers in being careful with their camp fires, cigarettes and matches; also to report any smokes they may sight to the nearest Forest officer or this office. Thanking you in advance for this valuable cooperation, I am, etc."

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Lookout Gets It Quick: A troup of Albuquerque Boy Scouts are in camp in Cienaga Canyon on the Manzano. By request of the Scout Executive forest officers have given the boys some practical instruction. June 16 Ranger Boone, Deputy Supervisor Nave and Mr. Cook of the DO put on a demonstration forest fire which the scouts suppressed. Purposely, the lookout, Carl Welch, on Cedro Peak was not notified of the demonstration. H. B. Hammond, formerly of the District office and now a per diem guard resident of Tejano Canyon , was duly informed, however, as he would be the man to look after a fire in that vicinity. A small out-of-the-way canyon was selected which, it was thought, could not be seen from the Cedro Peak lookout but that was a mistake. Hardly had the first puff of smoke gone skyward before the lookout nailed it, had it located and was ringing vigorously for Hammond. The whole demonstration area did not exceed a circle 50 feet in diameter, and high ridges were on either side, so Ranger Boone thinks he has a keen one on Cedro Peak. The scouts, after the last spark had been squelched, marched down the canyon and cached the tools at the San Antonito Ranger Station like veteran fire fighters.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Right Spirit on the Sawtooth: A very expressive pantomime was observed by the writer on a sidewalk in his home town recently.

Two tiny tots, sisters aged two and three years, were playing together utterly unconscious of any audience as children will. The elder was seen to pick some small object from the sidewalk, place it to her lips, and by the use of the facial muscles, denote extreme disgust. On nearer observation the object proved to be a "dead" cigarette. After repeated attempts to solicit the comfort supposed to be contingent upon smoking of cigarettes, she turned to her sister and apparently delivered a homily upon the evils of the habit. This being received with indifference she raised the product of the filthy weed as high in the air as she could reach, preparatory to casting it far from her. Immediately thinking better of it, she stooped over and industriously pressed the end of the "vig" on the pavement to make sure it was out, repeated this several times, then threw it into the snow.

Proof positive that our fire prevention propaganda is getting across.--J.E.M.

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"This Public Domain of Ours": A circular of the above title issued by the Utah Agricultural Experiment Station contains much interesting and valuable material. One copy has been sent to each Supervisor's office. We still have a few more and can perhaps get more from the Agricultural College for those who can use it to good advantage. The edition is small and the Agricultural College is being very generous to us in supplying us with copies of this publication. It must, therefore, be used only when it serves some definite purpose.

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DISTRICT 5 - CALIFORNIA DISTRICT

Law Enforcement Activities During April and May:

Mono

1. Nomadic Basque attempted to share the range of a fellow countryman - cost him $481.73. Cost his confederate a range for 1,950 head of sheep.

2. Chief Engineer of Walker River Irrigation District permitted employees to snag spwaning trout prior to opening of season and same were served on table. Pleaded guilty before Justice of the Peace and fined $100. (Ranger Atcheson.)

3. A sheep herder set fire on range in order to scare away coyotes; fire spread over 40 acres; taken before Justice of the Peace and sentenced to 15 days in jail and payment of $100. This fire first thought to be due to defective hay burner on donkey. (Ranger Clark.)

4. A sheep herder set fire to a tree as a signal; was intercepted before the fire was extinguished and fined $20. (Ranger Johnson.)

5. Last, but not least, one still (corn) reported to Sheriff of Mono County and pulled same in the afternoon. The Angeles has nothing on the Mono, although this may be of later vintage.

Cases except the first were completed within a half day; this case was prolonged to 1-1/2 days due to the absence of the Justice of the Peace.

Eldorado

On Sunday, April 27, H. C. Solomonson of Sacramento was apprehended by Forest officers on the Alpine Highway below Cooks Station and was found to have in his possession trout which had been taken out of season. He was taken before Justice Peter Jones of Volcano, pleaded guilty and was fined $35.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Oregon Editors Offer Aid: The Forest Service in the North Pacific District has no better friends than the editors. Witness the following wire received on June 5 from Mr. Hal E. Hoss, President of the Oregon State Editorial Association:

"Press of State ready to cooperate in publicity campaign to assist present forest fire crisis. This office at your service to bring matter to attention of public through State newspapers. Advise if needed."

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Score One for Snoqualmie: A signalman working with the logging crew on the Snoqualmie Forest on May 14 built a fire to drive away gnats in the middle of unburned slash. Fire was first noticed by Scaler Hurt who directed that the fire be extinguished. The signalman lost his job and on May 15 an affidavit was secured from him in which he admitted starting the fire on forest land without first obtaining a permit. On the evening of May 17 the trespasser appeared before Justice of the Peace Stohr at Darrington, pleaded guilty to the charge and was fined $10 and costs in addition to being reprimanded for his carelessness.--J.R.B.

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DISTRICT 7 - EASTERN DISTRICT

Spray Pump Economic Aid in Fire Control: District Ranger J. E. Potts of the Pisgah has been trying out a spray pump in fire control. This pump is manufactured by Armstrong Manufacturing Company, Huntington, W. Va. The tank is a galvanized knapsack about 6 inches wide, 20 inches across, 20 inches deep, holding 4 gallons. One end of a short piece of hose is connected to this tank, and the other end is attached to a brass cylindrical device operated like a squirt gun which sucks the water from the tank and forces it under good pressure to a distance of 40 feet or more. Nozzles easily adjusted give different sized sprays. The galvanized knapsack is provided with web straps so that it may be carried on the shoulders. The squirt gun is strongly made, is guaranteed for 4 or 5 years, and will stand a good deal of wear and tear. Assistant District Forester Scott and Supervisor Rhoades recently saw this spray in use on two fires, one of Class A and one of Class B size. In the Class A fire one man equipped with it made the fire safe in ten minutes emptying the tank three times. In the Class B fire it aided wonderfully in quieting the flames in ticklish places so that the fire did not break over the control line. Ranger Potts made the statement that one Class C fire he was on a few days before the pump saved a good many acres of land by killing the fire line long enough to enable the men with tools to perfect their ring.

Several methods of use suggest themselves as one thinks and talks it over. The galvanized tank is not essential, for instance. Another brass tube which comes in the outfit is an extension that can be attached to the hose and placed in a canvass water bucket. One might readily use it with a canvass water bag by inserting the rubber hose into the bag and sling the bag across the shoulder. The hose length can be varied to suit; the one coming from the manufacturer is 30 inches long and $\frac{3}{4}$ inch diameter. The squirt gun is about 30 inches long and 2 inches in diameter. The whole outfit is readily portable. It is worthy of a thorough testing out on other Forests. Several improvements might well be made if the equipment were to become standard.

The local retail price in Asheville, N. C., is $8.50 for the complete outfit consisting of pump, galvanized knapsack, extension, 3 nozzles, and hose. In quantities the complete outfit might be purchased for two or three dollars less.

This device is far superior to any of the compressed air sprayers of similar capacity.

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ALASKA DISTRICT - DISTRICT 8

Another Bear Story: On a trip from Sitka to Juneau last May in a ranger gas boat with Clerk Keyes as "deck hand," Deputy Supervisor George Peterson spotted a year-old brown bear swimming the half mile channel from Baranof Island west to Partofshikof Island, an eight-mile long islet which lies between Baranof and Kruzof Islands. "Brownie" had evidently just come out of his winter quarters and may have remembered a good feeding ground across the channel. We cut across his "bows" a couple of times, turned him back once to Baranof and had him flustered generally, but finally let him clamber up through the kelp to Partofshikof and lumber off into the thick forest. Partoshikof and Kruzof Islands are game refuges.

This was a Baranof bear, a little darker than the Chichagoff and Admiralty Island bears. He was nearly three feet high at the shoulder and about five feet long and could no doubt have put up a pretty good scrap on shore. The brown bears in this southeastern part of Alaska are not quite as large as the more famous Kodiak brown bears which are found about 700 miles further to the west. Our trip from Sitka to Juneau, close to 160 miles, was made in about 22 hours running time.--W.C.K.

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Historic Ranger Headquarters: Ranger Peterson's headquarters at Sitka are in probably one of the oldest buildings used by the U. S. Forest Service. It was an old Russian official building built more than a hundred years ago. It has log walls and floors about a foot thick filled in with sand. The walls inside and out have recently been covered with siding and the four or five original rooms partitioned off into fifteen or twenty rooms. It is now the Sitka Federal Building, the Sitka post office occupying about half the downstairs and other Government and Territorial officers also using the building. Pete has the upper floor for his living quarters and an office on the first floor.

Sitka is a gem of a little town with an extensive U. S. Agricultural Experiment Station, old churches, park with dozens of totem poles, broad sandy beach, Presbyterian Indian Mission School and pretty homes. The present site of Sitka was founded by the Russians in 1804. They settled at Old Sitka, about eight miles to the north, in 1799, which settlement was destroyed by the Indians in 1802.--W.C.K.

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Service Bulletin

U.S. FOREST SERVICE
(Contents Confidential)

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SOME MORE WORDS ABOUT CITATIONS

By C. M. Granger, D-2

Mr. Headley, in his recent question as to what we ought to do about citations for especially meritorious service or acts, has brought to life once more a subject which has been given some general discussion and quite a little hand to hand discussion for some time.

There has been, on the part of quite a few men, a feeling that going into such a matter on a wholesale scale might easily result in the opposite effect from that intended. Danger lies in the possibility of selecting the accomplishments or act of some individual for citation because his accomplishments or special act have come to the notice of some one who will start the movement, while some other officer doing equally creditable work or some equally commendable act may escape attention, or at least may not be noticed at that particular time. It is easy to sense the feeling which would be aroused where a citation was given to some person no more worthy of it than many others.

Furthermore, is there a danger of carrying the thing too far and issuing citations for accomplishment or acts which are only a proper part of the able handling of a job? I can see no objection to recognition of such outstanding things that all the Service recognizes as of decidedly exceptional character, but I think there would be a bad result from letting such citations partake at all of a routine character.

Another factor or perhaps a closely related factor is, in my mind, quite relevant. That is the feeling which a good many members of the A.E.F. gained during service in France that individual citations should be rare, and that the most valuable citation in the matter of stimulating pride, esprit de corps, and morale is the citation of a whole organization such as a company, battalion or regiment. Would not this work out with equal force in the Service? Would not each member of a Forest organization which has been cited as a whole feel more pride in the matter than would be gained by a citation as an individual?

I should not favor any distinguishing marks to be worn on the coat or elsewhere. Perhaps I am looking at this matter in the wrong way in view of the general use of such marks in the army, but I cannot help feeling that in the Service most men would prefer not to wear evidence of a citation even if received.

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THE LIBRARY

By Helen E. Stockbridge, Washington

During the fiscal year 1923-24 there were 794 new books added to the library, while 213 of the old ones were turned into the main library of the Department, in order to make more room on our shelves. The total number of books and pamphlets now on hand is 23,967.

There are 81 periodicals filed in the Service library, and as many more are sent over from the main library for temporary use. All of these, together with a large number of miscellaneous journals received in the Service, are reviewed by the librarian, and the important articles on forestry, lumbering, etc., are indexed by author and subject. Last year there were 2,937 books and articles indexed, and cards for them filed in the catalogue.

The librarian loaned 10,032 books and periodicals last year, while 1,419 members of the Service and others consulted the library in person. The number of registered borrowers on the library cards for the year was 156. There were also 67 names to which current periodicals were circulated regularly.

The monthly list of books and articles indexed in the Service library is still published in the Journal of Forestry. Several new special bibliographies have been prepared for distribution, and others have been brought down to date during the year. Among the most important of these are the ones on "Forest Problems in the Northeastern States," "Woodlot Forestry," "Erosion," "Thinning," and "Some Books on Forestry in English."

At present there are 163 field libraries in the Service, of which 145 are on the National Forests, 7 in the District offices, 8 at the Experiment Stations, 2 on range reserves, and one at the Forest Products Laboratory. In these libraries there are 33,389 charged books, of which 527 were added last year.

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A CORRECTION ANENT "RANGER DISTRICT NUMBER FIVE"

By Frank C. W. Pooler, D-3

The announcement of "Ranger District Number Five," in the SERVICE BULLETIN of December 31, was made upon receipt of advance pages sent out by the Spencerian Press, Boston, publishers of Hunter S. Moles' book bearing this title. The announcement included a statement that the characters in the book were actual people and that some of the older members in the District office had already picked out some of the more important ones; the conclusion being that "Old Mack," the Forest Supervisor, was likely Ross McMillen, and that "Mr. Ensley," the Forest Inspector, was likely T. S. Woolsey. This surmise was apparently based very largely on the similarity in names - "Old Mack," the Supervisor, being assumed to be Supervisor McMillen (the scene was laid on his old Forest) and the inspector, Mr. Ensley, being assumed to be former inspector Woolsey, Mr. Woolsey having been an inspector in the earlier Service days and there being a general similarity in names.

A reading of the book itself, however, easily convinces one who knows Woolsey that the comparison was entirely wrong and unfair, and in justice to Mr. Woolsey, whose character was entirely different from the inspector depicted, I desire to correct the former statement with apologies to Mr. Woolsey himself. As a matter of fact, it is probable that this particular character is purely fictitious. It is further believed that the older members were equally at sea when they picked Supervisor McMillen as "Old Mack."

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WHAT WILL PUBLIC REQUIREMENTS COST THE LUMBERMAN?

By S. B. Show, D-5

Most of us have assumed that the current practices in exploitation and treatment of private lands, with their corollary of serious injury to a large part of the cut-over acreage, are the cheapest, the least costly way of producing lumber. It has seemed that any changes looking toward more productive conditions of these lands must represent extra costs.

In the California pine region, investigation over a period of several years raises doubts concerning the essential correctness of this assumed barrier to continuous production of timber.

Take fire protection of cut-over lands, certainly the most important requirement. Until recently the occasional big and costly fire has been met by operators with a shutdown of the works, loss of equipment and logs, interruption of operations, and after it is all over, a return to the old heedlessness with fire. One large company finally undertook the revolutionary step of finding out what these occasional big fires were costing. Just two years' experience was sufficient to convince the management that it was cheaper to prevent than to fight fires. Systematic reduction of hazard, patrol, and partial disposal of slash have proved less expensive than the laissez-faire policy. Broadcast burning of slash becomes unnecessary with systematic fire control.

Destructive power logging is the second major issue that must be met in Public Requirements. A detailed study by the Forest Service indicated a slight cost differential in favor of the ground as opposed to the very destructive high lead method of yarding. An independent investigation indicates a possible 5 per cent in favor of the high lead, though the real argument in its favor is that it is easier on the loggers and requires less care in the logging plan. In all probability the very destructive methods of logging differ little, if any, in cost from those that leave the land in decent condition.

Seed trees are an essential if cut-over land is to restock, and in practice the smallest trees that will do are about 18-20 inches in diameter. In current practice such trees, especially of pine, are cut. Several studies of logging costs show clearly that in every step, from falling the tree to sawing the logs in the mill, the cost for small trees is several times as great per thousand board feet as for large trees. The potential seed trees apparently do not pay for the cost of manufacture. Cost per thousand feet of logging is higher when the entire stand is cut to a diameter limit of 12-14 inches, than when the cutting limit is around 20 inches, and as the average selling price of lumber is lower, we have the interesting situation that net return per acre is less with clear cutting than with partial cutting.

In short, it appears, from the evidence in this region at least, that instead of being costly and impractical, the Public Requirements are good business, merely from the standpoint of current operating costs. We can fairly take the position that adoption of these simple measures does not commit an operator to the practice of forestry, but leaves him in a position to do so, and that without materially different costs.

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WASHINGTON NOTES

Another Prohibition Argument: Charles W. Boyce who recently returned from a trip to the Northeast, where he was engaged in gathering information on lumber prices and transportation rates, found in the files of the city of Boston a continuous series of retail lumber prices from 1761 to the present. Boyce says "It is interesting to note that the cost of keeping the town punch bowl filled was greater than the cost of building done by the city in ye olden days."

The Forester Now in the Field: Colonel Greeley is now on a summer field trip but expects to return to Washington about August 12.

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FOREST PRODUCTS LABORATORY

Making Life More Pleasant for the Egg - and the Consumer: How to place the egg in more healthful surroundings by removing the odor associated with the strawboard from which egg cases are made is one of the problems put up to the pulp and paper section. It is said that the strawboard develops an objectionable taste in the egg during cold storage.

Some success has resulted from giving the straw pulp a chlorine gas treatment, and better results are hoped for.

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Uncle Sam's Forestry Classes Scheduled for September: Uncle Sam's classes in wood utilization conducted at the Laboratory will have their next session during September.

The general subjects are kiln drying, wood properties and uses, boxing and crating, and gluing of wood. By giving the courses at somewhat different times, students may take more than one on the same trip to Madison. More than 700 men have taken advantage of these industrial short courses.

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FOREST EXPERIMENT STATIONS

How Important is the Source of Seed for Forestation Purposes?--Half-acre plots of two-year Scotch pine seedlings grown from Austrian and Riga seed have been planted by the Northeastern Forest Experiment Station in cooperation with the Forestry Department of the Massachusetts Agricultural College at the Mt. Toby College Forest. The trees have been planted at the rate of 1,000 per acre with a 6.6' x 6.6' spacing. On one half of each plot Norway spruces have been planted at the center of the 6.6' squares formed by the pines to determine the feasibility of raising Christmas tree stock in mixture with pine. Periodic observations will be made to determine the relative development of the stock grown from the Riga or Baltic Scotch pine seed and the Austrian Scotch pine seed, special consideration being given to the relative desirability of the stock for planting in the Northeast. It is believed that there are certain characteristics possessed by trees which are the result of climatic conditions, and these characteristics are retained and transmitted through inheritance. It is possible that Scotch pine grown from seed obtained from the Baltic provinces has straighter and cleaner trunks, therefore yielding lumber of a higher quality than that raised from the Austrian variety of Scotch pine. This experiment at Mt. Toby should throw some interesting light on this subject.--M.W.

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DISTRICT 1 - NORTHERN DISTRICT

Bank to Use Fire Prevention Material: One more example of how outside agencies are gradually coming to realize the value of forests, and are cooperating with the Forest Service in the prevention of fire, is shown by the letter recently received from the Old National Bank of Spokane.

"Dear Mr. Morrell:

"We believe that you will be interested to know that The Old National Bank is actively cooperating with the publicity campaign which is being conducted for the purpose of urging the public to help prevent forest fires.

"The imprint shown in the lower left-hand corner of this letterhead will appear on all of the letters of the Old National Bank and Union Trust Company during the next few weeks. The quotation used was taken from the President's proclamation issued during 'Forest Protection Week'. Some of our newspaper space has also been devoted to this cause.

"We hope that this movement will have the wholehearted support of everyone in impressing upon the people of this country their responsibility toward the preservation of one of our greatest natural resources.

"Yours truly,
/S/ W. D. Vincent,
President.

WDV:CK

"'I urge all citizens to give
common thought to the protec-
tion of our forests from fire.'-
President Coolidge"

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

The Elks State Convention at Greeley, Colorado, passed resolutions condemning the use of elks' teeth for emblems because of the extensive slaughter of elk involved. According to these resolutions the tooth, contrary to popular understanding, is not the official emblem. This step, which places the matter before the Grand Lodge, shows an increased interest in the preservation of wild game which is likely to benefit more than the elk.

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Tip Moth Run to Earth: The reported ravages of the tip moth on the San Juan Forest called forth a formidable array of talent this spring.

These men descended on the Forest in a body, representing Research, Forest Management, and Grazing, the latter being represented in view of the claim of some that this tip moth bore striking resemblance to a cow. After extensive investigations it was decided that this tip moth had indeed assumed the shape of a cow, being less than one per cent what is generally known as tip moth.

Boy "will you please again page Mr. Chapline?"

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Ranger's Pants Destroyed by Forest Fire: The recent Horse Mountain fire on the Prescott Forest broke across the control line when the wind changed, and it raced away blasting and burning everything in its path, even to the trousers of Ranger Albright who was battling to keep the flames within bounds. His fine Waltham watch was in the watch pocket and was likewise destroyed. Both watch and trousers were a total loss. Rangers frequently have exciting experiences and narrow escapes in fire fighting but seldom do the flames consume their very pants. However, Mr. Albright was not injured. Before beginning work on the fire he had removed his good trousers, the pair that was burned, hung them on a bush and put on some that were suited to the job.

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"As the Twig is Bent--": Not so very long ago 10-year-old Ralph Freelove rode a panting pony up to the station with the announcement that a big smoke was coming up in Los Pinos Canyon, above the station. A rancher up there had told us that he intended burning slash resulting from last winter's timber cutting on his ranch that day, but Mrs. Ranger who happened to be holding the fort at the moment, sent the diminutive Ralph up there just to make sure. It developed that the rancher had left a fire of the "absolutely safe" variety to go to dinner, and the fire, having its own ideas regarding absolute safety, had got out and was having a perfectly gorgeous time in the surrounding slash. An alarmed sprint from the dinner table and considerable energetic pulling of brush soon returned the blaze to the status quo, and Ralph returned to the station to report. In winding up he said, "He hadn't ought to go away and leave fires burning that way - and I told him so too."

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DISTRICT 5 - CALIFORNIA DISTRICT

Forest Service Office at Upper Lake Burned: Fire, which started in McCready's restaurant in Upper Lake, destroyed the business section of the town on May 28. The local Forest Service office, together with its records and furniture, went up in smoke, Ranger Durham being absent from town at the time of the fire. Former Ranger George Squire's new store escaped the flames. Service tools and equipment were luckily stored in a barn at some distance from the office. This is the second time that the Upper Lake office has been burned out within a period of about two years. The total loss from the fire is estimated by the papers at $150,000.

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Spreading the Gospel of Forestry: Supervisor George W. Lyons a short time ago occupied the pulpit of the Alturas First Congrenational Church. Some of the Modoc force who were actually in attendance were possibly a little disappointed in not being invited to the mourners bench, but felt themselves more than compensated in their enjoyment of the excellent talk on forestry presented by their Supervisor. While the Good Book was very prominently on display during the service, those who were present are inclined to believe that the text was taken from the Modoc Forest library.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

House Organ a Booster: The Standard Oil Bulletin for April contains a very profusely illustrated article on the Mount Hood region. There are many fine cuts. The center page says that "the Mount Hood National Forest is popularly known as 'Portland's Playground' only because the residents of Oregon's largest city made such good use of it. It is a national playground."

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Conifers Galore: The timber survey crew on the east side of the Mount Hood Forest is working in a sort of natural arboretum, there is such a variety of tree species. Close to their last camp were twelve varieties of conifers - white, yellow and lodgepole pine, Douglas, white, silver and noble fir, larch, western and mountain hemlock, western red cedar, and Engelmann spruce. Near-by are three more yew, dwarf juniper and alpine fir. Can you beat it?--T.T.M.

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Mt. Adams to Swarm With Hikers: The Mt. Adams- Mt. St. Helens region this summer will be very popular with both the Mazamas and also the Cascadians. The Mazamas will spend from August 2 to 18 in that region; the Cascadians will 'out' from August 3-17, the two parties meeting somewhere in the region for a grand reunion 'neath the shadows of the glaciers. The Cascadians circular describing the trip is spotted with fire warnings and sanitation cautions, which is fine; the Mazamas say in their circular -- "The Mazama camps will be in the National Forest, so great precaution must be observed with fires."

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National Forests in Cartoons: The National Forests, forestry, forest fires and forest rangers are getting into the consciousness of the American people. When national cartoonists begin to use these in their daily sketches it is a pretty good evidence that they are "getting over" to the public generally. Forestry and forest fires have been played up in cartoons of the District 6 press for some time, especially during Forest Protection Week, but when such national cartoonists as Jimmy Swinnerton, Sidney Smith, Pop Momand, King, and others equally well known, begin to use them it's getting over. In Momand's "Keeping Up With the Joneses" of May 7, forest fires appear; in Smith's "The Gumps" of May 25 a "forest preserve" shows up; and King had forest rangers mentioned in "Gasoline Alley" a few weeks ago, in the search for the lost Skeezix. The mere mention of forests, forest fires, and rangers in these nation-wide cartoons may seem trivial, but such is not the case; it all helps to popularize and make known to the American public that there are such things as forests, forest fires and forest rangers, especially to the dweller in the big cities of the far east.--J.D.G.

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DISTRICT 7 - EASTERN DISTRICT

Virginia Forests May Become Bird Sanctuaries: A number of bird sanctuaries may be established on the Shenandoah and Natural Bridge National Forests as a result of joint efforts now under way between the Department of Game and Inland Fisheries of the State of Virginia and Forest Supervisors Marsh and Sears. The Service and the State authorities have agreed upon general principles in connection with this project and the immediate next step will be to select the best and most available areas which will insure the objects sought.

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Looking Over a Dam Site: A tentative site for a dam across Panther Creek in the Wichita National Forest was selected recently by a committee from the Lawton, Oklahoma, Chamber of Commerce. The location of dam sites in the Wichita is part of the program of the tourist committee of the Lawton chamber with a view not only to attracting tourists to this section but to improving the recreational facilities of the Wichita for the adequate accommodation of tourists who come. The dam site selected by this committee would permit the construction of a 15-foot dam impounding a lake of about 3 acres.

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Teachers Recognize Value of Forestry: The teachers of Montgomery County, Arkansas, assembled in annual convention at Mount Ida within the Arkansas National Forest on June 20 adopted the following resolutions:

"Whereas, Arkansas to-day stands high among the States of the Union in the production and manufacture of lumber and other forest products, and

Whereas, Abundant forests, widely distributed and properly maintained in a condition of high productiveness, are essential to the continued comfort, welfare, and prosperity of the people of our Nation and of this State, and

Whereas, Because of our constantly increasing demand for wood and other forest products, and because of our failure to care for our forest areas and properly protect them from that great destructive agent, FIRE, our supply of timber is being used and destroyed many times as fast as renewed through growth,

Therefore, Be It Resolved, that we, the teachers of Montgomery County, Arkansas, in session at Mount Ida, Arkansas, recognize the need of properly conserving and perpetuating our supply of lumber and other forest products and that we pledge ourselves to help eliminate this ruthless waste and destruction by calling the facts relative to the destructiveness of forest fires to the attention of our pupils and others with whom we may be associated."

This action by the Montgomery County teachers is very largely due to the personal effort of Ranger Abner Casey who in spite of many other pressing duties has found it possible to become personally acquainted with a majority of the county teachers and who aroused their genuine interest through trips over portions of his district which served to clearly demonstrate the crying need of fire protection.

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Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

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"A CREEK BY ANY OTHER NAME WOULD FLOW AS SWIFT"

By Jno. D. Guthrie, D-6

What Forest Officer has not been wearied of seeing and reading commonplace and well-nigh meaningless names of mountains, peaks, creeks and lakes on National Forest maps? Some statistically-minded person could put in a lot of time compiling from maps of the 146 National Forests the numbers of Bear and Bald Mountains we have. Our streams run strong to animals - Bear, Beaver, Cougar, Buck, Deer, Cow, Horse, Sheep. Our maps fairly reek with Cottonwood, Willow and Beaver Creeks. How many Lost Lakes have been found? The Clear Lakes are legion. True, Forest Officers have not been entirely responsible for this unimaginative naming; many were christened by early prospectors and stockmen, but we have been guilty of some commonplaces.

How much better to bestow names with meaning. No one would favor upsetting our forest geography by changing the names of all of our creeks, peaks and lakes, but we Forest Officers are finding new topographic features now and then, we are ridding our maps of duplications. What more fitting tribute to the Forest Officers who have labored here and gone on than to have their names go down in National Forest history, given to features on the National Forests? In many cases much confusion would result from attempting to change from well accepted names of peaks, creeks and lakes to new ones, but ranger stations and forest camps seem to offer opportunities which we still have within our own discretion.

We in the North Pacific District are proud of the start that we have made in thus honoring former officers. Sixteen former members of the Service have had mountains or other topographic features named in their memory. These features are found on ten different Forests. Seven of these names were bestowed before the creation of the U. S. Geographic Board, six have been approved by the board and two are pending.

The Snoqualmie leads with four: Mt. Price for Overton W. Price, Mt. Fernow for Dr. Fernow, Mt. Bullen for Scaler C. N. Bullen, killed while scaling logs near Darrington, Wash.; Johnson Mt. for Willard D. Johnson, at one time in charge of Maps and Surveys. The Cascade ranks second with three: Pernot Mt. for John F. Pernot, formerly in charge of forest insect work in D-6, killed by a runaway horse; Harvey Mt. for J. Roy Harvey, an honored pioneer Ranger; Erma Bell Lake for Miss Erma Bell, for many years a computing clerk in the District office. The Mount Hood has two: Mt. Mitchell for Roy Mitchell, a World War veteran killed in a forest fire in 1919; Frazier Mt. for Donald Frazier who died in military service in 1918.

Each of the following seven Forests has one each. The Siskiyou has Milbury Mt. for William Milbury, a Forest Ranger for many years on that Forest; the Whitman-Ireland Mt. for Henry Ireland, for many years its Supervisor; the Olympic with Muncaster Mt. for Ranger Roy Muncaster, of the 20th Engineers, who lost his life on the "Tuscania"; the Rainier has Plummer Peak, in honor of Fred G. Plummer, for many years chief of Geography in the Washington office; the Columbia with Augspurger Mt. for Stanley Augspurger of the 20th Engs., who went down on the "Tuscania." The Umpqua has Jackson Creek in memory of Clarence W. Jackson, for many years a faithful Ranger on that Forest and who was killed in 1923 while driving a Forest Service truck. And the most recent case, the Colville Forest has Taylor Ridge, in memory of Ranger Norman E. Taylor, 10th Engs., who died in 1924 as a result of injuries in the World War.

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HONORABLE MENTION VERSUS HONORABLE PATCHES

By W. M. Rush, Lewis and Clark

No doubt there are many, many cases where the hard working Ranger has done some especially difficult job without the facts becoming known to the whole Service, and it is a pretty safe bet that he did his extra bit without thought of having any mention made of it. The scheme of publishing an Honor Roll in the Service Bulletin of the men that perform especially good pieces of work in any of the manners suggested, such as by being brave, industrious, intelligent, tactful, resourceful, enduring, or lucky, is a fine idea.

In simple justice, though, the roll should be headed by the oldest Ranger in the Service and contain all the names down to the latest probational appointee. For who is there to know from first-hand knowledge of the really hard things the Ranger has bumped up against except the Ranger himself? The Supervisor's office could not possibly make a fair, impartial selection of any single man on the Forest to go on the roll to the exclusion of the other men, for the very obvious reason that even with the contact that the Supervisor's office has with the field it cannot know of all the details of the work of each Ranger, particularly the difficult things that a real Ranger never speaks of more than necessary. Much less could the District office or Washington men know of the real, honest-to-goodness hard jobs the Ranger tackles, and, as in 365 days' time almost any field man performs some Herculean task, it would be only simple justice to include all of their names on the Honor Roll. This applies to the spectacular, the romantic, the heroic, and the chivalric side of a Ranger's life and work.

The real working side - prosaic, I believe, is the standard descriptive word for this side of life - is another thing. If the D. O. and Washington men really understood the calm self-reliance and confidence with which most of the field men tackle a bad fire, a bad citizen, or a bad bronc, and the inner fear and trepidation that he experiences in trying to carry out some of the Public Relations policies, all of the boys' names surely would be on the Honorable Mention Roll each year after Forest Protection Week.

Why limit the Honorable Mention Roll to Supervisors, Rangers and Guards, as Mr. Headley suggests? Are you other fellows timid? How about having the Honor Roll include only D. O. and Washington men and have the names on the roll selected by the Ranger force?

No, let us not have any such roll. We have the uniform, the service stripes, the standard necktie and little badges; so let's do not have the special Mention Roll, as it savors too much of the sheepherder's "Card of Thanks" and the little picture verse cards the Sunday School kids get for knowing the text each Sunday.

Instead of Honorable Mention let's adopt the Honorable Patches idea. One of our great novelists based a mighty fine story on a character he called Honorable Patches and the lesson of self sacrifice he teaches in his book might well serve as a guide to all of us. Let our patches be our own satisfaction in the knowledge of a job well done, a riper experience gained by our own efforts, and a deep-rooted self-confidence with which to tackle the next job. Let's wear our patches next to our hide and not on the uniform for the rest of the world to see.

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MASSACHUSETTS FORESTRY ASSOCIATION HAS POSITION OPEN

Mr. Harris A. Reynolds, Secretary of the Massachusetts Forestry Association, Boston, Mass., has written to the Forester as follows:

"Here's a matter in which I think you can give me some help. I am looking for a man to fill a position which is rather difficult to fill in some ways. The job is to show our motion pictures and to give talks before School Children, Women's Clubs, Boards of Trade and other organizations. While not actually engaged in that work the man will solicit members for the association. The job is worth between $4,000 and $5,000 for the right man. I thought that you might have some one in mind now in the Service whom you could spare and who is anxious to get back East. I know that in traveling through the West I have run across a good many men who are anxious to get back into Eastern work. I don't want to trouble you too much with this request but if you have one or two such men in mind and can spare them I should be glad to have their names and addresses and anything you may know about their qualifications. We would prefer to have a single man of good presentation whose knowledge should be divided between 70 per cent salesmanship and 30 per cent forestry. I presume you have some who could qualify on the 30 per cent forestry all right, but the 70 per cent salesmanship is a difficult combination to find."

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WASHINGTON NOTES

N.E.A. Exhibits Draw Good Crowd: It is estimated that about 400 persons visited the Forest Service exhibit held at Moses' store during the N.E.A. convention. Of this number 90 persons registered and about 100 attended the lectures. One hundred and ninety-two persons registered at the Central High School and 10 persons at the Savoy Theater. The total number of persons registering at all three places was 292. This number represents teachers from 42 States and Canada.

Besides making some valuable contacts for the Service, this exhibit gave us some good advertising. There were many people who did not realize that the Forest Service exists. One teacher said that she had been wanting material like ours for a long time, but did not know where to get it. She asked that we send her everything that we could. Of course many thought we belonged to the Interior Department. Although we got only a small part of the visiting teachers, the exhibit was a success.

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DISTRICT 1 - NORTHERN DISTRICT

"O, Wad Some Power": D. C. Chambers, for five years elevator conductor in the Federal Building in Missoula, recently reached the retirement age, and has left the Government Service. Mr. Chambers' long acquaintance with us of the District Office, and his interest in anything which would enable him to give better service made his leaving regretted by us all, and that the regret was mutual is evidenced by a memorial he addresses to the members of the Forest Service from which the following excerpts are quoted:

"The Forest Service gives to this community the highest example of brotherhood and world service. Its members are as a great family, each member contributing his full measure of devotion that the whole may be perfect in all parts. Here is one joyous round of business. ***** Here is a unity of purpose - perfect harmony in all things. This is no place for a 'grouch' or a 'sorehead.' The slogan is 'Service first, last, and all the time.'"

These statements, from an employee of The Treasury Department, may be colored by the fact that the writer is also a Government employee, but, in any event, it is a sincere opinion, based upon long acquaintance, and we should be glad to accept from an outsider the encomium we may not utter in our own behalf.

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Flathead Pictures Well Liked: The following is quoted from a recent letter of L. O. Evans, attorney for the Anaconda Copper Mining Company, to Jack Clack, referring to the Glacier Creek pictures taken by Asabel Curtis in the Swan River country on the Flathead:

"I have the pictures which I ordered for myself some time ago with me in New York, and they certainly have been enthusiastically admired by everyone I have shown them to. Evidence like this of the country we have out there I think is the best possible advertising Montana could have, and this realization, together with an understanding of the splendid work the Forest Service is doing in opening such country and making it available to our citizens, cannot but result in assistance and encouragement to all of you in your work."

Many other letters of appreciation have been received.--T.S.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

D-2 Planting Reconnaissance: During the past season an extensive planting reconnaissance was conducted to determine the amount of land which it will be necessary to plant. The information shows a total of 1,211,538 acres of land that is considered for immediate planting; 196,000 acres of this total is represented by the treeless Nebraska Forest, the remainder consists for the most part of burns either completely barren or with a light aspen cover. This total also comprises areas restocking to unmerchantable species, such as the Michigan Forest, where the plantable land supports a scattering growth of scrub oak and jack pine.

This area of immediately plantable land comprises about 6% of the total net acreage of the District and the forestation of this land to valuable species will add a large volume to the timber production of the District in the future. The largest portion of this area is in Colorado, which contains 891,385 acres of plantable land; Wyoming reports only 55,000 acres. The burns on the Black Hills Forest have nearly all reseeded and the job here is very small. The largest burns are in the Engelmann spruce and Douglas fir types. The largest areas in need of reforestation are on the Grand Mesa, Cochetopa, Pike, Rio Grande, Gunnison, San Juan and White River Forests.

In addition, 235,476 acres of dense aspen land not considered plantable at the present time, was reported. There are also approximately 200,000 acres on the Superior Forest which is covered with aspen, birch, balsam, and jack pine which the District feels should be planted to desirable species after these inferior species are cut off. Sales are now starting in this type and will soon proceed at the rate of 3,000 to 4,000 acres annually.

According to plans, the Minnesota job can be completed in four years, and if the Michigan planting is undertaken at the rate recommended, the job should be finished by 1938. Within five years, the District proposes that 11,000 acres be planted annually which will cost approximately $100,000.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Forest Training Camp Selected: Fort Valley has been selected as the most suitable place for the Forest Training Camp, after a careful canvass of the various sites in the District. It is expected that 31 Forest Rangers will attend the camp for training and instruction. The camp will open September 1 in charge of E. W. Leveridge assisted by other members of the District Office.

The Lincoln Writes a Column to the Public: A new phase of cooperation between an editor and the Forest Service for the prevention of forest fires has been brought forward in Alamogordo. The Editor of the Alamogordo News extended space to Supervisor Arthur for a frank open letter to the public on the value of the Lincoln Forest and the necessity for care with fires. The opportunity was well used. In six numbered paragraphs timber policy, water conservation, grazing, roads, recreation and the value of Forest Service pay rolls and administrative expenditures are set out clearly. Fires, their causes, methods of prevention, relation to prosperity of community and how to put them out, completes the discussion in a way that gives the conclusion of the whole matter.

Air Soldiers to Help in Case of Fire: The Fort Bliss squadron of the Army Air Service has about a hundred men in summer maneuvers camp on Willow Creek on the Gila. Supervisor Winn has the promise of the commanding officer for the assistance of the birdmen in the event of a fire emergency on either the Mogolion or the McKenna Park Ranger Districts.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Federal Business Association Organized: On June 20 in the office of the District Forester at Ogden, fourteen executive employees representing eight different Government bureaus having branches in Ogden, met and organized the Ogden Federal Business Association. District Forester R. H. Rutledge was elected president, Assistant Postmaster E. A. Stevenson was elected vice president and District Fiscal Agent Lee Stratton was elected secretary-treasueer. An executive board of five members was appointed, consisting of the three officers above named and Captain John McDonald in charge of the army arsenal near Ogden and J. L. Welch of the Federal Grain Supervision at Ogden.

The purpose of the organization is to effect cooperation and coordination of effort of the several Government bureaus represented in the immediate vicinity, this to result in more efficient conduct of Government business with a saving of expenditure wherever this is found possible. Considerable discussion was made by all officers present and some of the suggested items of cooperation are combined purchases of materials, such as coal; loan of autos and trucks, one bureau to another; exchange of clerical help in times of need; informal advice by the Assistant to the Solicitor to bureaus having no legal assistant, etc. There is every reason to believe that this association will be the means of improving Government service in this section of the State and effect savings in Government expenditures which could not be made otherwise.

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Fire Law Enforcement On Lemhi: On June 10 and 11, Ranger Jesse Olsen and Mr. Winkler came across 3 camp fires at the head of Pinto Creek, within the boundaries of this Forest. Upon investigation it was found that Fermin Abue, Basque, and Charles Williams had promiscuously scattered these fires to protect the sheep from coyotes. They were both young men, mere boys, with very little experience within the National Forests and outdoor life. They were consulted and consented to plead guilty at any time they were called to report to the Supervisor's office. The owner of the sheep was consulted and agreed to bring the men to Mackay on the morning of June 17. A charge under Section 8346 of the Idaho compiled Statutes of 1919 was made before Judge Kilgore. They both pleaded guilty to the charges and were fined $25 each. After the judge's verdict was rendered Mr. Winkler gave them a personal talk on care with fires in the future, which was accepted in good spirit.

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DISTRICT 5 - CALIFORNIA DISTRICT

Interesting Discovery: Ranger Atcheson of the Mono has at the Bridgeport Ranger Station a section of a pine tree on which is carved in large letters and figures "Webster 1861." The initials were covered by new growth before the tree died. This tree was discovered by a trail construction crew near the head of Fremont Canyon, and the carving was doubtless done by one of the early day emigrants who followed that route across the Sierras.

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Spare ~~the~~ Time Jobs: Every Ranger Station on the Mono is provided with a neatly made screened meat cover for use in keeping pepishable supplies during the warm season. These covers are painted green and have the words "Mono National Forest" stenciled thereon in white. All kiacks used on the Forest are also marked with the Forest Service shield and Forest name in green. The official "Ford" also has the same shield and name painted on the door. This work was all done by the Rangers during the winter months.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Portland Department Stores Help: For several days around July 4, two of the largest department stores in Portland carried forest fire cautions in their ads in three of the daily Portland papers. All that was necessary was to see the advertising manager, make a little "sales" talk, supply him with some fire slogans (in mimeograph form) - and he did the rest! In addition, they are using some of our flashy fire signs in their camping window displays.

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Comments from Seattle Laboratory: J. D. Studley, formerly of the Forest Products Laboratory at Madison, who is taking his research work in timber physics at the University of Washington under C. W. Zimmerman of the Seattle Laboratory, has just completed for his thesis a report entitled "The Cost of Kiln Drying Compared to the Cost of Air Seasoning Heavy Sizes of Green Swamp Oak." The report was prepared by Mr. Studley from data collected while a member of the Madison Laboratory force and shows conclusively that it is more economical to air season than to kiln dry heavy sizes of green swamp oak.--C.W.Z.

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

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PREVENTION OR SUPPRESSION?

By E. H. MacDaniels, D-6

A while back somebody made a wise remark that may have something in it. He said that the way to handle forest fires was not to have them. That is not as crazy as it sounds. Only a few years ago, Applegate River, Butte Falls, the South Umpqua, and twenty other places in southern Oregon were certain of ten to fifty incendiary fires every summer. The Siskiyou was right up in front with the leaders, and still ranks high.

No one has as many fires of this sort as he used to. Why not? Why did the people who used to set them out quit it? There are several answers - some of them died or left the country; some of them are afraid to; some of them are convinced that setting out fires does not pay. Very good. Now, if these people were convinced, why are the rest of the firebugs still starting fires? Why are they not afraid to start fires, or why do they think that it is the thing to do? Some of them do not know any better, some are half crazy, some are just naturally mean, some profit by fires; most of them can set out fires without getting caught.

All this was equally true of the old-timers that used to be so busy. I remember a number of them well, and they were as ignorant and mean and crazy as the people we suspect today. But they don't set out fires any more. Something came into their lives and made a great change.

Whatever it was that changed these people was big medicine, and we need a lot of it for use this summer. Curry County, Oregon, is one of the last strongholds of the light burner. It is a tough nut, but no worse than the Applegate and the South Umpqua were. Not much worse, anyhow. It is better than it used to be. The problem is considerably narrowed down. We still have our annual Flea Camp fire and our Quosatana Creek fire. We rather look for a Cow Creek fire. Until very recently there was a regular Pistol River and an Elk Creek fire. The Baldface fire used to be as punctual as the calendar, until Si Beris died.

It does not seem reasonable to believe that nothing can be done about it. We know well enough who sets out most of these fires. They can hardly resist forever all the influence that we can bring to bear on them. Sometimes the District Ranger, or someone whom he can hire as guard, can get on such friendly terms with the firebug or put him under such obligations that he will quit his meanness. That is one mighty good way to manage it. Sometimes he can be argued out of it. It is possible that an alert guard, camped in his neighborhood and following his movements closely, might cramp his style. If he, or some of his friends, profit by a fire, we should go to almost any lengths to see that no wages, or packhorse hire, or profits from the sale of goods come his way. There have been cases in which lodge connections, used rightly and legitimately, were useful. If there are children in the family, sometimes the old man can be reached through them. In some districts the residents have been allowed to draw inferences from things that the Forest officers did or said that made them behave themselves for quite a while. For instance - when the airplanes first patrolled the Coast Range, the number of burning permits applied for in one district suddenly rose from eight or ten to a couple of hundred. No more slash was burned than usual, but it was burned under permit. The accidental presence at headquarters of a hound dog with a severe expression is said to have done a lot of good in a California district.

A rather extreme measure is to hire an extra live firebug and while he is in this exposed position, give him an intensive course of treatment that will place him permanently on our side. There is a distinction between doing this and being blackmailed into giving a firebug a job.

Sometimes a Forest officer raises doubts of his sincerity by joking about fire prevention. This is a mistake. If we do not take it seriously, no one else can be expected to. If someone starts the subject by making a joke of it, that is often a good opening for a few pointed comments that will set the crowd thinking.

Any of these things beat fighting fire, provided that they work. They all have to be used with discretion. It is possible to become a pest on the subject of fire prevention. It is easy to make extravagant statements of what fire prevention will do that reflect on the common sense of the man who makes them, and weakens his position past mending. A bluff is a success only if it goes over. To get caught with a broken "straight" is plain bad judgment.

These are a few of the measures that have brought down the number of incendiary fires in Oregon. Tactful, appropriate, and continuous application of them will wear through almost any crust of cussedness in time. There are so many instances of impossibly bad situations being straightened out that this is getting to be the measure of a Forest officer's capacity. To start to fires fast and put them out quick is a matter of course. That is the least that can be done. If the fires do not start, that shows that a regular man is on the job.

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FIRE CONDITIONS IN THE DISTRICTS

By G. G. Anderson, Washington

Extraordinary fire conditions existed in Districts 1 and 5 during the first ten-day period of July. District 1 reported 280 fires during the period; of these 23 were Class C, of which ten were still burning on the Kootenai, Pend Oreille, St. Joe, Clearwater, Nezperce, and Lolo with a reasonable change of control if weather conditions do not get worse. Lightning fires numbered 222, 90 on the Clearwater. Forty campers' and smokers' fires indicate the advisability of closing extra hazardous areas to campers except under permit. Areas have been closed on the Blackfeet, Flathead, and Kootenai to camp fire building, and an area on the Pend Oreille was closed to campers except under permit. Continuous clear weather is predicted, with temperature high and humidity low. Forty-eight emergency men were under employment when the wire was sent. In District 5 six large fires were burning uncontrolled on the Tahoe, Sierra, and Santa Barbara, with the situation extremely critical. For District 2 the conditions were reported normal except in Colorado and Minnesota, and in District 4 the weather was reported dry and the hazard acute on the central Idaho group of Forests, but conditions normal elsewhere. General rains have reduced the hazard except on the southern Arizona Forests. District 6 reports the humidity very low and inflammability high. The total expenditures for the period were $113,336, of which the largest amounts were in Districts 1, 5, and 6, being $26,000, $62,000, and $22,000 respectively.

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MORE ON THE "HONORABLE MENTION" SUBJECT

Maybe the Forest Service camp will be divided in two great classes on the "Honorable Mention" discussion opened by Headley and Gill in the June 9 SERVICE BULLETIN. All those people who believe they would be nominated for "honorable mention" will perhaps through delicacy refrain from advocating the scheme proposed, and only those who feel that they have never done anything that would warrant their being put on the "honor roll" would feel free to debate the matter. I am in the latter class, and therefore am free - and may be afflicted with "sour grapes."

Perhaps I am in error in my thought of what the attitude of the average Service man or woman would be towards such a proposition, feeling as I do that if anything is coming to me it would be a lot of demerit badges for not having done the things I should have done. But anyway I can't believe that those men and women whom Headley describes can possibly be the least bit unhappy over the fact that they are not sought out and decorated before the world as men or women set apart from their fellow workers for their especial service. Mr. Headley suggested some possible ways if the thing were to be done. They are perhaps as good as any, but think of them in practice. Does any quiet, unassuming Forest Officer want to see his name emblazoned before the Forest Service with a citation for something done in the line of his duty?

There isn't any way of doing justice in such a proposition and the man cited would feel certain, unless he has an exaggerated ego, that there were a lot of others who had given equal or better service who had not been discovered. I doubt that men in the Forest Service care to be recognized in this way. It doesn't seem to me desirable that they should.--Fred Morrell, D-1.

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Honorable Mention !? From what I know of the field men of D-2, I am dead sure that they - we - do not want it in any of the forms suggested; neither the "honor roll" in the SERVICE BULLETIN nor the sleeve stripe or stars or an insignia in any form. I know this is true, but it is hard to explain just why it is true or how I know it.

Possibly this illustration will help: You can all remember, back in your school days, how you used to love "teacher's pet," the nice little boy who got "honorable mention" from teacher. Now, although more or less older, you have changed very little in basic relations, in instinctive likes and dislikes and you will not like it any better than you did or than we do.

I am thoroughly in sympathy with the "objective" and believe there is a way to the desired end but that way has not yet been mentioned. The easy way is often not the best way. Let's not be in a hurry about adopting the "teacher's pet" idea.---P.Keplinger, D-2.

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WASHINGTON NOTES

Reclassification Increases: Now that salary reclassification for the Washington office and salary adjustment for the field is an accomplished fact, Mr. Sherman said he would like to call attention to it in order to correct any impression that reclassification is largely a dud. Reclassification for the Washington office means actually an increase in basic salaries of $74,636. Salary adjustments in the field mean an actual increase for the year of $1,275,419. The total increase for the Forest Service is thus over $1,350,000. In the past we have considered ourselves exceedingly fortunate if, upon the first of July, we have been able to secure promotions for the Washington office and the field aggregating a total of $50,000. That amount has been reached but a very few times. Of our total increase in compensation under reclassification, approximately three-fourths represents the bonus, so that the actual increase in compensation is about $600,000, or a good deal more than we would ordinarily secure by promotions in a period of twenty years under the old plan. While some individuals are not affected to any extent by reclassification, it is upon the whole a very substantial "Christmas tree" offering to the organization.

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Mr. Norcross has returned from an inspection trip to Alaska. Upon his return trip he met the District Engineers of Districts 1, 2, 4, 5 and 6 at a conference in Ogden. At this meeting various Engineering matters were discussed.

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DISTRICT 1 - NORTHERN DISTRICT

Compensations: That there are compensations in being a District Forester is well demonstrated by the following special delivery letter addressed to the District Forester at Missoula, Montana:

"Schenectady, N. Y.,

"My dear forestry friend:

"I am a student of Junior High School and I am aiming to be a forester because I love nature's outdoors. Oh! How I like to be out in the woods these swell forests. I would like you to write me, how many forest fires did you have? I read sometimes about forest fires in Idaho, Oregon. How are you and how are you getting along? I will be very thankful if you will send me some information regarding to Forestry.

"I remain your forest friend,"

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Buck Law Produces Results: The game reports from the field indicate a substantial increase in the number of deer in the National Forests during the past two years. Especially is this true in those counties where the One Buck Law is in effect. Taking the District as a whole the number of bucks in relation to does seems to be satisfactory. Out of 2,864 deer seen and the sex determined, 977 were bucks which would tend to settle the question that is often raised about there not being enough bucks. The distribution of bucks seems satisfactory on all Forests. At least the percentage of bucks to does seems uniform and in no case is there an indicated shortage of bucks.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Ten Thousand Telephone Poles have been cut this season on the Cochetopa Forest and this amount will probably be increased to about 20,000. These poles are being cut by the Trinchera Timber Company for the Mountain States Telephone Company and are to be treated at Salida and used in the Rocky Mountain territory. It is understood that fence posts will also be produced and treated for shipment to the plains region to the east. The sale of these products will assist materially in the utilization of lodgepole pine on the Cochetopa Forest.

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District Forest Inspector Hoar of Duluth reports that at a meeting of the State Forestry Board of Minnesota about the first of July, Mr. G. M. Conzet, who has been Acting State Forester since the resignation of Mr. Cox last winter, was elected State Forester for a term of five years.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Forest Protective League of Citizens: In Douglas, Arizona, business men have formed a league for the protection of the Coronado National Forest. The Secretary of the Chamber of Commerce brought about the organization after a conference with the Forest Supervisor. Douglas is situated on the Mexican border in hot semi-desert country and is dependent upon the forest for outdoor rest and recreation. Sixteen practical outdoor men make up the working scheme of the league. Should a fire emergency arise, the Secretary will immediately notify these men. Each one is pledged to leave for the fire at once equipped with fire fighting tools and provisions.

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Southwestern Forests Have "Steep Country" Contest: The Carson in northern New Mexico began it by challenging that there are canyons on that Forest so wide the ravens have to relay to fly across them and that the country is so newly heaved up from the infernal regions that it still smells of brimstone. Then the Datil, America's largest continental National Forest, replies - some one always replies - that the reconnaissance crew on that Forest is on its third set of hobs on the third pair of shoes this season and the Datil Canyons are just as wide as Carson Canyons only their wideness is up and down. The contest closes, however, and silence reigns when the Crook in southern Arizona offers an innocent tale, without reference to or asperity against any other Forest, about how one of its best Rangers fell out of a timber sale cutting area, marking hatchet in hand, three times in a single day and refused to go back to finish the marking.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Good Work on the Targhee: Clark County held a celebration the fourth and fifth of July near the south boundary of the Targhee on West Camas Creek. Evidently some of our "PR" work on fire prevention has been put across successfully for not one fire occurred, nor any camp fires left before being put out, during the two or more days celebration, although the danger was greater than it has been for years. It was estimated that from 1,000 to 1,500 people were at the grounds or camped on the different streams in the vicinity during the two or more days. Much credit is due Ranger Allan who had the grounds well posted with fire signs and saw to it that each one of the 200 cars was supplied with our windshield sticker. The Clark County Enterprise-Banner ran a half column on fire prevention, while the Sheriff and others issued verbal warnings to all in regard to care with fire. Even the two stores at Spencer are to be commended on the stand they took. No fire crackers or other fireworks were stocked from which there was any danger of "fire" just on account of the risk or hazard from this source.

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DISTRICT 5 - CALIFORNIA DISTRICT

Uncle Sam May Have Gift of Big Trees: In 1909 a special law was passed by Congress authorizing the exchange of National Forest land and timber for the Calaveras Grove of big trees, Stanislaus National Forest. This law was revised in 1913 and made more flexible, but the exchange was not consummated. Interest in this exchange has recently been revived, resulting in the holding of a conference in Washington not long ago between owners of the property, members of Congress and others. As a result it seems quite likely that the Government is in a fair way to acquire the Calaveras Grove, which is the most northern grove of giant Sequoias. Preparatory to such an exchange, a timber survey of these private lands has been made.

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Another Convert: Acting Supervisor Brown and Ranger Barnum of the Modoc brought Raymond Anchordoguy before a Justice of the Peace on June 24, and charged his herder, Lauveur Etchegoinberry with responsibility for starting the fire west of Bark Spring on Monday, June 23. Anchordoguy pleaded guilty on behalf of his herder and was fined $50. He stated to the Court that this herder was a "green" man with very little experience in herding in a pine timber country. This sheep herder covered his camp fire as instructed by the camp tender, but instead of using dirt, covered it with leaf mould and ground litter, which held the fire. The high wind rising on the afternoon of June 23, scattered the fire which burned over 5 acres before being finally controlled. Anchordoguy's foreman helped the Forest officers fight the fire. The herder when interviewed by Ranger Barnum was very badly frightened and it is certain he will be more careful in the future.--W.S.B.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Fire Prevention on the Natron Cut-off: The Southern Pacific Railroad is building a new line through the Cascade and Deschutes National Forests. Supervisor Macduff reports regarding the fire prevention measures on the Oakridge-Klamath Falls line:

"The railroad company and its contractors are being required to employ a firewarden in each camp and one chief firewarden who shall have no other duties than fire prevention and suppression and the supervision of brush and debris burning, who shall be acceptable to us and are to be instructed by us; and who are to be appointed State Firewardens (without authority to issue burning permits) and with authority, both by State law and by agreement of the company and its contractors, to take men from any camp for fire prevention or suppression. In addition a portable gas fire engine with 1200' of hose and competent operator is required in every camp which is clearing right of way. Under these requirements there will be one chief firewarden, 7 to 10 camp firewardens, and 9 gas fire engines."

DISTRICT 7 - EASTERN DISTRICT

Citizens Recognize Value of the Ozark: The citizens adjacent to Simpson, Arkansas, held a community meeting recently to revive community interest. A similar meeting was held at Freeman Springs, Arkansas.

J. H. Lawson of Freeman Springs was the principal speaker at each meeting and very forcibly stressed the many advantages the citizens were receiving at the hands of the Forest Service in the development of our road, trail, and telephone line systems. He appealed for hearty cooperation in the protection of the forest from fires. That his talks in our behalf for the protection of the Forest were well taken by the audiences is manifested in comments heard from different people who were at the meetings.

Although aware that our fire troubles on the Ozark are not over, we feel that we are on the road leading to better protection when we are able to come in, without any special solicitation, for a talk in our behalf in meetings of this kind, and it is indeed encouraging to know that some of our most enterprising citizens have reached the point where they are willing to come out publicly in the interest of forest protection.

Service Bulletin
U. S. FOREST SERVICE
(Contents Confidential)

Vol. VIII, No. 31. Washington, D. C. August 4, 1924.

HERALDING A BIRTH IN THE SERVICE

By M. C. Merrill, Washington

A baby has been born in the Service but whether boy or girl no man knoweth. Possibly it's a combination gender and has the good qualities of both sexes. Let us hope so.

The little stranger arrived on the scene during the Service meeting of May 17, at which the question was eloquently debated as to whether our Service Bulletin mailing list should be extended beyond the Service to include Forest Schools particularly, and, incidentally, State Foresters and the increasing number of others desiring it. The majority of the doctors and nurses present seemed to be against the idea - they preferred to see the Service Bulletin remain a confidential house organ in which absolutely free expression of opinion could be registered by every member of the Service; where a spade could be called such and the 9-ft. road anything the editor would be willing to print.

Colonel Greeley has honored the infant by acting as godfather and christening it "The Forest Worker." If the rations are forthcoming and it grows normally it will be dressed up in its Sunday best, put on its good behavior, and on September 1 make its bow to the parlor guests. Thenceforth every two months it will make a public appearance, unless it grows so fat and attractive that its presence is desired more often.

The invited audience before which he, she, or it will appear has been listed as follows:

(1) Faculty members of Forest Schools.

(2) State Foresters and the technical or administrative personnel of the State Forestry Departments.

(3) Officials of forestry organizations.

(4) Secretaries of timberland owners fire protective associations.

(5) State Directors of Agricultural Extension work and Extension Foresters.

(6) Cooperating Bureaus.

(7) District Foresters and Directors of Forest Experiment Stations.

Emphasis will be put on short, pithy items, personals, and articles of fresh current interest sent in by recipients of the publication. There will be included lists with brief abstracts of material made available by forestry agencies; helpful suggestions as to methods and procedure which may be useful to forest workers; and clipped items from news letters, periodicals, and from various sources. Prominence will be given to forestry work in the States and at the Forest Schools.

It is our hope that this periodical will serve as a clearing house of information between the States, the Schools, and the Service bearing on such matters as new legislation or legislative proposals, development in fire protective work, acquisition and administration of State and Federal Forests, planting work, new methods and developments in educational work, bulletins and other publications or material on forestry, farm extension notes, etc. It should be a medium for the exchange of ideas and for developing and maintaining esprit de corps among those especially interested in forestry.

Articles appearing in the Service Bulletin will be used if considered of interest or value to that audience and if not confidential or too controversial. Short articles written by members of the Service primarily for the outside audience will be both welcome and appreciated.

The question of citations and stripes for this youngster is still open. Stripes there may be, for they are part of the experience of early life, but whether on the sleeve or elsewhere will be determined by the conduct of this offspring.

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RANDOM REFLECTIONS OF A FOREST INSPECTOR

By I. F. Eldredge, Washington

It is a tough life, this prowling around the mountains with a hard-boiled expression and a three-ring notebook looking for trouble. Many is the time when, as I dragged my weary carcass through the unlopped tops on some steep-sided timber sale area, growling at everything in sight and fighting deer flies, I have wished that I had taken up chicken ranching instead. Trouble shooting in the backwoods is not all that it is cracked up to be, but it has its rewards just the same. Every now and then in the round of the National Forests, I run across a group of timber sale areas in which a master mind and a cunning hand have left their impress for the coming generations to see and to profit by. The sight of such areas revives pride in my calling and renews my faith in its justification. For every sale area that is marked with the consummate skill of the master craftsman, there are literally hundreds which exhibit the flat and colorless efforts of the rule-of-thumb workman, and it is a blessed relief to now and then find a real masterpiece tucked modestly away in the hills awaiting the time when an enlightened appreciation of such things in the Service will give it the recognition it deserves.

In late years the word "forestry" has, in the Service at least, been stretched to cover everything we do, from salting longhorns on the mountain side to addressing the Lion Tamers club at a retailers' luncheon. Well and good. These are a necessary part of the work of a wide-awake forest officer. In fact they are essential adjuncts of the practice of forestry. But let's quit kidding ourselves into believing that such activities are in themselves forestry or that excellence in their performance can make up for a failure to function as foresters in the true meaning of the word. Forest administration and forestry are both practiced on the National Forests, but the two are not the same thing, and the Service of which we are so rightfully proud must ultimately fail in its mission if the practice of forestry in its true and restricted sense is not made the very spear point of all our effort.

You may well ask "Who are our foresters anyway?" I will not attempt to specify all of them, but state without hesitation that foremost among our foresters are the men who wield the marking ax in our timber sales, and this holds true whether they are trained or untrained, sympathetic or indifferent, wise or foolish. It is to these men that we must look for the results which in large part will either glorify us or haunt us like Banquo's ghost when the time comes for our patrons, the people, to measure us by what we have to show on the ground rather than by what we say about ourselves in the papers.

I do not believe that the Service as a whole realizes or recognizes the importance of the work we trust to the men with the marking ax. It is by the timber that we will raise on the areas now being cut over that the Forest Service is going to be judged. What we raise on these areas in the next crop is being settled once and for all by the skill, or the lack of it, of the man who translates theory into action with his ax. No matter how poorly a trail is laid out or a road built, no matter how inaccurate a map is or how wrongly a telephone line is projected, the mistakes can be remedied as soon as discovered. But when a man marks timber his errors might as well be carved in marble for they are there to stay and stare us in the face and shame us throughout our lives and well into those of our sons.

It does not take a solemn-faced inspector from the Washington office to detect the handiwork of a master in the marking of a cutting area. Any woods-wise man can sense it at once. It is not merely a matter of pleasing appearance; it is a process of teasing nature into doing more for the chosen trees than she would if they were left to the care of fickle Lady Luck.

It is a matter of applying man's intelligence to the natural situation to the end that in the second crop every tree will grow the maximum quantity of high-grade material in the minimum time and every acre will contain the maximum number of such trees of the most desirable species.

A college degree in forestry is not an essential step towards skill in the expression of knowledge and vision with the marking ax, but a degree from nature's university is. No man can hope to master the art of marking who does not intimately know the growth habits and requirements of the trees he is dealing with, together with all of the qualities of soil, aspect, climate, light and competition and their effect upon tree growth. Such knowledge is not yet in books, but the woods are full of it and any man who can read the woods can get his degree in forestry and qualify for that band of immortals whose good works live after them.

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THE FIRE SITUATION

By G. G. Anderson, Washington

The fire troubles this year have been the worst the Service has known for many years. The latest news (July 30) from all Districts, however, indicates that the big fires are under control, except in California, where serious fires were still raging. The California and northern Districts lead in the number and extent of the fires thus far. Conditions in the other western Districts have not been so bad, although many sections report critical hazards. The Service to July 20 had spent close to $450,000 during 1924. The crisis came in the first three weeks of July, the expenditures during this period being nearly double the total amount spent in the earlier part of the year.

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WASHINGTON NOTES

Cacti - Tree, Shrub, or Weed? Recently it became necessary for Mr. Dayton to decide whether a cactus was a tree, a shrub, or a weed. After looking up the authorities he furnished the inquirer the following statement as to where cacti should be placed:

"Incidentally, it is our present feeling that it is better to classify cacti with "Trees & Shrubs," *i. e.*, browse, than under "Nongrass-like Plants (exclusive of Trees & Shrubs) - *i. e.*, "weeds." Many cacti are indubitable trees or shrubs, so recognized by everyone, and the aerial stem portions of the vast majority (perhaps all?) of them are, while succulent, *perennial* and contain woody tissue - hence they are technically shrubs even though the typical shrub aspect may not be present."—W.C.B.

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El Vaquero Botanico: The Washington office Branch of Grazing has recently reported on what is believed to be the first stockman's herbarium ever submitted to the Service. Mr. E. G. Hayward, Manager of the Waite Phillips Company's "Hawkeye Ranch" at Cimarron, New Mexico, submitted through the District Forester at Albuquerque 28 pressed plant specimens mounted on letterheads, of which he wanted "both the common name and the scientific name" and information as to their forage value or poisonous properties, if any. Mr. Hayward further volunteers: "This is not all, however, and I will collect the others sometime later and send them to you."

With the western cowman turning to scientific methods what may we next expect? The brawny lumberjack poring over Graves' Mensuration and resolving surds? "Oh Earth, what changes hast thou seen!"--Daytonia.

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FOREST EXPERIMENT STATIONS

Chestnut Blight in Georgia: Two new spot infections of chestnut blight were recently located near Blairsville, Georgia, in Union and Towns counties, by E. F. McCarthy of the Appalachian Forest Experiment Station. One infection was found just north of the Blue Ridge, about ten miles south of Blairsville. Two trees were found infected and several others were seen, which showed blight evidence in the higher limbs. The other area of infection was located north of Brasstown Bald Mountain, about five miles from Young Harris, Georgia.

In both instances, the blight appeared to be developing rapidly on the tree and had come into evidence for the first time this year. These infections are in a region which has a high percentage of chestnut, especially on the upper mountain slopes. This extended the known southerly range of the blight, although a number of infections extended through North Carolina and Tennessee to this region.

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Boy, Page Harold Bell Wright! The report of the Lake States Forest Experiment Station to its Advisory Committee promises to break into the class of the six best sellers. The demand for it has already necessitated three editions and only recently a communication was received offering to purchase ten or twelve copies.

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DISTRICT 1 - NORTHERN DISTRICT

Is This Fire Weather? The following was one of the regular daily telegraphic fire reports received from the Selway Forest July 16. The relative humidity of 5 per cent was presumably taken by the Weather Bureau cooperator at Kooskia. This followed 6 days of relative humidities of 8, 11, 11, 14, 16 and 22 per cent, respectively, as officially ~~recognized~~ recorded at Spokane.

"Dry Bar safe. Two fires started yesterday section 31 township 32 range 6 ----. Reached 200 acres. Held tonight with 35 men ----- now safe. No other troubles from fires on forest. Yesterday humidity 5, temperature 106, wind 26 miles per hour."

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Observations on Animal Life: (Double Burn 1910 and 1919, Deep Creek, Coeur d'Alene National Forest, Area about two townships.)--It may be of interest to add a few observations and opinions regarding the effect of two such serious fires upon game animals, birds, and fish. Blacktail and white-tail deer are fairly abundant. They feed on vegetation out on the burned areas and spend the nights in the small clumps of timber or dense brush in the draws and creek bottoms. Pheasants are very scarce. During three weeks' stay on the Deep Creek area only three pheasants and one or two blue grouse were seen. These held forth in the vicinity of green brush or small clumps of green trees. One or two pine squirrels were seen or heard in the larger patches of green trees which had survived both fires. Ground squirrels, mice and chipmunks were very few and song birds almost entirely wanting. People told that the amount of trout in the streams had been reduced at least 50 per cent. Beaver, on the other hand, are plentiful, but whether or not they have increased or decreased after the burns is impossible to state.--J.A.L.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Yellow Pine Blister Rust.--Considerable alarm has been felt for several years because of the presence of the Yellow Pine blister rust, Peridermium Harknessii, in the Halsey plantations on the Nebraska Forest. Recently Supervisor Higgins didovered this same infection in a Scotch pine plantation located near Ainsworth, about fifty miles north of Halsey. This plantation was established in 1898 on private land by the old Federal Division of Forestry. It is of course unknown whether the stock was infected when sent in or whether the spores of the blister rust were carried by the wind from the native yellow pine along the Niobrara River, which is about twenty miles north. In any event, this illustrates that it is almost impossible to isolate a plantation of forest trees even in long stretches of treeless country without in time getting in some injurious disease or insect.

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Some New Movie Stars: A Pathe motion picture man spent several days in June at the Monument Nursery filming the life history of yellow pine. He started with the pistillate and staminate flowers and followed on up through seed production, seed sowing, germination, different aged seedlings and field planting. It is understood that he may follow the game through to the sawmill. This reel will probably be released in October.

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Eggs Will Be Eggs: Editor, Washington Bulletin,

Dear Sir and Brother:

Regarding the Forest Products Laboratory note in the July 14 Service Bulletin about odoriferous egg cases leads me to suggest that you give the EGG the chlorine gas treatment!

Yours for fresh ones,

C. M. G.

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Mr. C. M. G.,

Dear Old Pal:

Consider it done!

Yours for better chickens,

M. H., the Ed.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Who's the Ranger and Where Does He Live? A late novel by Peter B. Kyne makes much of a certain Forest Ranger in the Southwest. It describes his place of abode. In a corner of the living room is a complete set of taxidermist's tools and a half-mounted grouse adorns a rough homemade table. A well-worn set of Dickens reposes on a shelf in company with about two dozen volumes on technical forestry, a copy of "The Vanishing West," and one of "Wild Life of America." The kitchen larder is well stocked with provisions. The climactic point of interest is, however, that on the floor lies the Ranger's wallet which contains, among other trifles, five uncashed monthly salary checks!

Editor's Note: I move this piece of information about the uncashed salary checks be kept away from Headley. Motion carried!

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Many People See the Pinnacles: The recently established Chiricahua National Monument is a great and wonderful mass of grotesque shapes that have been left by wind and weather erosion. Many of these are gigantic pinnacles from 150 to 200 feet high. They are tucked away in what has heretofore been almost a hidden part of the Chiricahua Mountains in southeastern Arizona within the boundaries of the Coronado Forest. Roads and trails have now made the monument reasonably accessible, however, and it is estimated that fully 600 people have visited the place this year.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Engineers Conference: A two-day conference of District Engineers was recently held in Ogden. Messrs. Mendenhall (District 2) Dater (District 6) Bonner (District 5) and Thieme (District 1) were in attendance, together with Mr. Norcross of the Washington office. The principal discussion at the meeting was on the forest highway standards, Classes 1, 2 and 3, the idea being to fix certain specifications for the classes of roads based on the class and amount of use. The specifications included width of road beds, alignment, grades, draining structures and surfacing. For all roads which would need to carry only a small amount of travel at a low rate of speed, narrow widths, comparatively short curves and comparatively heavy grades up to 10% were advocated. On the highest type of road widths of 23 feet, maximum grades of 5%, except in special cases, and light curves were advocated. The Forester and District Forester will consider the recommendations made at the conference and proposals will be made to the Bureau of Public Roads for the consideration of that bureau.

* * *

Sticking Close to His Occupation: Camp fire left burning. Supervisor McCain had the automobile number of the man who camped there, however, and hurrying in to Moran found him there, and taxed him with his carelessness. The man denied it.

"All right," says Mac, "come on back. I've a man there guarding it as evidence, and you can judge for yourself whether you left it burning or not."

"Sure, of course I left it. How much is it going to cost me," replied the fire scatterer.

"Well, if the J.P. is feeling good, probably the minimum - $10 and costs," said Mac.

"All right, fair enough. Lets go in and have it over."

So they did, and $10 and costs it was.

"H---" said the traveler, "and I belong to the Los Angeles fire department!" -- F. S. B.

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District Office Girls Step Out: The girls at the office recently took the four-thirty Bamberger to Lagoon. First, they all went in swimmin' and made Mack Sennett's bathing beauties feel like Canadian dimes. After that they had some fruited snow, the heavens know where the snow come from, and hot dogs and cotton candy and ice cream cones, and went on the scenic railway - some of 'em went eight times. Then they went in the "Fun House" and got all bunged up going down the bump-the-bumps and the ocean wave and turn-table. Only five of 'em fell down in the revolving barrel, which if you've ever tried it will prove what excellent equilibrium is cultivated in the Forest Service.

Did they all have a good time? Swell.

Oh, I almost forgot. After that they ate.

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DISTRICT 5 - CALIFORNIA DISTRICT

Coordination in Fire Emergency: District Forester Redington, State Forester Pratt, and Norman H. Sloane, Manager of California Development Association, recently met in conference and outlined a program calling for the cooperation of all the citizens of California and the coordination of all agencies to meet the present forest fire emergency confronting California. Mr. Sloane has turned over the entire organization of the California Development Association to assist the National and State forces in fire suppression and fire fighting activities. A State Citizens' Committee has also been organized by the California Development Association for the purpose of giving close cooperation and assistance to the U. S. Forest Service and the State Board of Forestry through Chambers of Commerce, and seventy-one industrial, financial, and civic leaders of the State were appointed members of the Executive Committee of this organization. All directing forces have been concentrated at the Ferry Building offices in San Francisco so that the closest cooperation of lay and official forces can be obtained.

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Development of Gas Tractor Logging: Gas tractors and big wheels are being used quite extensively and very successfully this season in northern California in connection with logging on slopes up to 25 per cent. Apparently one of the best types of tractor for the work is the Best 60 H.P. manufactured by the C. L. Best Tractor Company of San Leandro, California. The Robinson Big Wheels manufactured by the Robinson Tractor Company of Oakland, California, are generally used. Where this type of equipment can be employed the cost of yarding is said to be only about one-half of the usual cost where donkeys are employed.

Lumberman Brown of the Lassen Forest has made a study of this type of logging and a copy of his report has been forwarded to each of the Forests which have a considerable timber sale business. It is hoped that this report will be carefully read and that Forest officers will make every possible effort to introduce this equipment on National Forest timber sales. While considerable swamping is necessary in connection with the use of wheels, on the whole the forest is left in much better condition than where donkeys are employed. No injury is done to saplings, poles and trees left, which is a very great advantage from the forestry standpoint.

A further study of the possibilities of this equipment is contemplated. More about this later.--T.D.W.

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More Cooperation: The Los Angeles Board of Supervisors, on June 17, again voted $20,000 to be used on trails, firebreaks, public camps, etc., towards the additional protection of the Angeles Forest.--R.H.C.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Fire Prevention Poster Panels: Twenty large poster panels, 11x25 ft., are a feature of the special D-6 fire prevention publicity campaign. These have been erected at strategic points where they will be seen by automobile travelers throughout western Oregon and Wasgington. They are contributed to the campaign by Foster & Kleiser, the dominant billboard company of the Pacific Coast.

The posters are hand painted, with a dark green background. Across the upper portion of the panel are the words: "PREVENT FOREST FIRES" in large letters. The letters are bright yellow at the bottom, shading up through orange, and bursting into red flames at the tops. Below this is an undulating ribbon of light green and orange-red stretching across the panel. In the lower left hand corner, in white, are the words "Be Careful"; and in the lower right hand corner, "Courtesy of Foster and Kleiser." The ensemble is very striking.

This is an interesting reaction from a supposedly "hard-boiled" commercial institution. The posters are considered very valuable forest protection publicity. This was one of a number of cooperative contributions secured as the result of a forest protection talk at the Portland Ad Club.

* * *

And Such is Fame!. Jack Horton of the Deschutes wrote a bit of verse ("doggerel," a supercritical critic calls it!) for local use during Forest Protection Week. He called it "Bill Camper." A copy went into the Washington office eventually and with this result:

"The American Automobile Association expects to print this bit of doggerel verse in an early issue of the AMERICAN MOTORIST. Very frequently the moral of a tale can be put across better in this way than by lengthy arguments. Consequently we are glad that Mr. Horton's effort will be printed in a magazine of considerable circulation." (Letter from Washington Office.)

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Daily Radio Broadcasting: Through arrangements with the Portland "Morning Oregonian," a forest protection message is being broadcast every evening from KGW, the Oregonian station. This arrangement will be continued throughout the fire season.

Following are the titles of the talks which have been broadcast to July 24; The Red Menace; Fire-The Outlaw; We Need More Moisture; Humidity Drops-Be Careful; Fire Weather Again; No Fire-works; A Holiday Thought; Practical Patriotism; Fire Danger Still Acute; Anti-Fire Association Campaign; Smokers' Fires; Somebody Does It; Burning Wealth; The Smoke Nuisance; They Shall Not Burn; Use or Abuse; Hope of the Future; Closing the Forests; Put It Out; How to Do it; What is Relative Humidity?; Forest Fire Situation Improved; What the Forests Mean to You; Low Humidity Again.

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DISTRICT 7 - EASTERN DISTRICT

Good Publicity for the Alabama: A full 2-page spread of Alabama National Forest pictures, with interesting descriptive matter, featured the rotogravure section of the Birmingham News on Sunday, July 13. The News which admits being "the South's greatest newspaper" sent a staff photographer to the Forest for four days early in July and the display above mentioned was the immediate result. A secondary result is a greatly stimulated public interest in the Forest throughout Alabama, finding immediate expression in increased recreational use and in opportunities for public cooperation in development projects.

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Fire Report for Last Fiscal Year: Compared with the record of a year ago, a marked reduction in the number of fires is shown in District 7's cumulative fire report of June 30. For the entire calendar year 1923, 1180 fires were reported from the Forests of this District. Nine hundred and

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AUG 11

GRAZING MANAGEMENT PLANS--WHITHER ARE WE DRIFTING?

By Paul H. Roberts, Sitgreaves.

Our present grazing management plans lack the "breath of life." They are tending to become more voluminous, more detailed, and more complicated, thereby retarding the attainment of the very objectives which we set up. The vital need is a form of Grazing Management plan which will present the objectives of grazing management and at the same time will have all the necessary data and information for carrying out the objectives, so that the plan will be clear cut and useable by the Forest Supervisor or other administrative officers. It is not that the data in the present plans are not needed, but the trouble lies in the form in which they are presented.

Forest Management, after years of wandering, has come out of the wilderness. Although I am unfamiliar with the early stages of Forest Management plans, I have had considerable experience with the present plan for one Forest and know that it meets a vital need in Forest administration.

What are the essentials of these plans which make them so useable? From the Supervisors' standpoint they are:

(1) A clear cut statement of the objective of Forest Management on the Forest.

(2) The real management plan is set apart from all other parts, and is concise and clear cut. It leaves the reader with a clear understanding of how the timber resources of the Forest should be handled.

(3) These plans separate the atlas and most of the compilations from the plan.

(4) The plan is put in letter size form and is readily accessible. An atlas form of plan is usually approached with considerable awe and hesitation. It requires no effort to dig into a letter size plan.

(5) The division of the written material into four parts consisting of, I. Foundation, II. Plan of Management, III. Administrative Correlation, IV. Appendix.

(6) Many details are left to be worked out by the Forest force, with such assistance as may be necessary from the District Office.

(7) They are made by men who are familiar with the Administrative problems which may be encountered.

It seems to me that Grazing could well borrow from the experience of Forest Management. Back of a Forest Management plan lie all the detailed calculations used in arriving at the plan itself. This detailed work is probably more complicated and just as essential in working up a Forest Management plan as a Grazing plan, but it does not crop out in the plan to befog and obscure the plan itself. A Forest Management plan, subject to revision, is built to govern the management of a crop which takes in the Southwest from 150 to 250 or more years to produce. To deviate from the plan may be an error which it will take generations to correct. Grazing Management plans cover the harvesting and management of an annual crop. Errors in management may take years in some cases to correct, but they can hardly be as far reaching as bad errors in Forest Management. If this is true it should be possible to have Grazing Management plans at least as concise and usable as Forest Management plans.

I believe that Grazing Management plans built along the following general lines will be of greater assistance to the Supervisor and other administrative officers, will tend to hasten results in grazing management, and will reduce the cost of administration through eliminating the need in some cases of technical grazing assistants to decipher the plan and put it into effect;

1. Adopt the general scheme of grazing management, of separating atlas records and detailed compilations from the plan itself.

2. Adopt the letter paper size and general form of the Forest Management plan. Some alterations will be necessary, but in general the data contained in the Forest Management plan are comparable to that required for a Grazing Management plan.

3. Where possible confine the plan to Grazing Districts, leaving much of the detail as to allotments to be worked out on the Forest. This is comparable to the determination of order of cutting, etc., by the local Forest force according to highly localized forest conditions.

4. Present a definite plan of management. This plan should have a statement of objectives showing the class or classes of stock for which the range is best adapted, the broad forage types and areas of each, the proper season or seasons of use, and the numbers of stock by classes which should be allowed to use the range. The means of attaining the desired objectives should be contained, in accordance with a suitable outline, in the plan.

It is not expected that the above suggestions for changes in the present form of Grazing Management plan are final. Special conditions may require a modification in form. It is strongly felt, however, that Grazing Management plans constructed along these general lines will serve a far more useful purpose than the present plans by securing better use of the range and ease of administration.

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FIRE POSTERS AND SUNPROOF INK

By C. M. Ballard, Washington

An item by F. S. B. in the Intermountain District Daily News has "Ranger Redbeech" saying that our beautiful red fire poster, the one showing the "lean, long-bellied wolf animal," turned white after exposure to the elements.

The Office of Publication has tried repeatedly to secure from the Public Printer posters in colors that are sunproof, but up to the present time it has not met with success. A personal visit to the Government Printing Office recently resulted in a conference with several representatives of the Public Printer. The chemist, who has charge of the paper and ink testing, thought that it might be possible to test printed posters in the "fadeometer," a machine specially made to test the durability of colored paper, ink, etc. He will have several posters printed with different kinds of red ink and exposed to the lights in the fadeometer for about 14 hours. This test will prove the kind of ink best suited for signs to be posted outdoors.

An order for the outlaw poster was sent to the Public Printer some time ago. The chemist promises that the test will be made before this poster gets on the press, and if an ink is found that is sunproof it will be used. The Public Printer is glad to cooperate in this work, but he calls attention to the fact that no colored ink or colored paper will last indefinitely after being posted.

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LET'S LEAVE 'EM AS THEY ARE

By Ben C. Heilman, Gunnison

I am with and for Mr. Juno in his statement "Why not leave things as they are" in answering Mr. Headley's article on citations. From Supervisor to Forester I do not believe there is one but who is anxious to note meritorious work and commend accordingly as opportunity offers. This more or less personal contact method of recognizing good work expresses honest, unvarnished appreciation better than can be presented by a committee through the columns of the SERVICE BULLETIN. Why not leave things as they are? Why pass from sincere expression to sepctacular manifestation?

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MAIL ORDER HONORS

By Ferdinand W. Haasis,
Appalachian Forest Experiment Station

The Corporal had joined us on the most welcome assignment of the entire War - detail to a detachment for transfer for discharge. He had two cavalry enlistments and a Navy term behind him, besides his current voluntary enlistment period. One of his many remarks during the long tedious hours and days when the discharge machinery was presumably functioning had to do with "these Sears-Roebuck officers and Montgomery-Ward men."

Brethren, is there not danger of saddling ourselves with Sears-Roebuck citations and Montgomery-Ward service stripes?

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WASHINGTON NOTES

Hail to the Kirjeenvaihtajajaseneksensa! And such is fame! Bill Sparhawk, the famous statistic hound, has had another honor thrust upon him. He has just been appointed Kirjeenvaihtajajaseneksensa of the Suomen Metsatieteellinen Seura.

For the benefit of the Forest Service morons who are unable to understand what it is all about, let me hasten to explain that the first word means "Corresponding Secretary" and that all the rest of it means "Finnish Forestry Society," the object of which is to promote scientific forest investigation in Finland. This gives Bill the Olympic championship in the way of lengthy titles. Seriously speaking, though, Sparhawk's appointment is rightly considered an honor.- M.H.

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Because of limited mechanical facilities this issue of the Service Bulletin must be limited to four pages.

Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

Vol. VIII, No. 33. Washington, D. C. August 18, 1924.

THE WINNING TEAM

By Roy Headley, Washington

Unless the fellows who believe in some form of "honorable mention" for individuals speak up quickly it looks to me like the proposal is not only dead but too badly damaged to be worth skinning.

But let's think about Mr. Granger's casual suggestion in the SERVICE BULLETIN of July 14. Isn't there a sound fundamental principle embodied in the idea of citation of a working group? The typical Forest officer who would be embarrassed by public attention to his personal accomplishments would, I believe, get a lot of pleasure out of a citation of the administrative unit to which he belongs.

To start the ball rolling I propose the following:

Every year the Forester has a number of men in the Districts. These men are more or less experts in their particular lines, and, aside from a possible slight weakness for the District from which each came, are as impartial toward the different Districts as human beings can be.

At the end of each season let the Forester call all these men together for the purpose of determining which National Forest District has the greatest all-around accomplishment to its credit for the year, relative difficulties and opportunities considered. It is not likely that such a group could agree completely, but it is likely that such a discussion would enable the Forester to discern what he could safely recognize as Washington opinion on relative accomplishment. Incidentally, the process of analyzing and weighing accomplishment in different lines ought to yield results in the way of correlation of ideas of Washington men that would be of value to the whole Service.

The decision reached could be announced in the SERVICE BULLETIN, and, if desired, an appropriate emblem or certificate sent the happy District to tie to the chimney of the District office or hang on the wall of the District Forester's room.

By the same method the Forest could be recognized that is found by the District Forester and his advisors to have accomplished the most.

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THE "LIGHT BURNING" FALLACY

By S. B. Show, D-5

The fire protection policy of the Forest Service seeks (1) to prevent fires from starting and (2) to suppress quickly those that may start. Periodically this established policy is criticized by those who hold that the deliberate and repeated burning of forest lands offers the best method of protecting those lands from the devastation of summer fires. Because prior to the inauguration of systematic protection, California timberlands were repeatedly burned over without the complete destruction of the forest, many people have leaped to the untenable conclusion that the methods of Indian days are the best that can be devised for the present. It is commonly assumed in this argument that controlled burning of the forests, either in the spring or fall, is an easy practice which can be carried out at slight expense, with negligible damage to the forest itself, and with complete or nearly complete removal of the accumulated debris which inevitably forms in any growing forest.

It has been found, however, that to actually carry out controlled burning in our diversified mountain topography is an exceedingly difficult and costly practice. If the fires are really "controlled," experience shows that it costs not less than 35¢ and as much as $1.00 per acre each time the forest is burned over, and since this must be done every few years the cost over a period of years soon becomes prohibitive for any but the holder of a very small parcel of land. Again, while in theory it is simple to select the proper time of year for burning, in practice it has proven to be extraordinarily difficult to find conditions when fires will start without developing into devastating conflagrations with all the characteristics of the summer fires which the practice seeks to prevent.

Even very light fires properly controlled cause serious damage to the forest which they aim to protect. The young trees particularly are killed, and even the largest and most valuable veterans are not immune to death from these creeping fires. It has been found that even when properly controlled such fires cause a loss of value amounting to several dollars an acre each time that they run through the forest.

The most serious result of repeated burning of the forests is that the gradual destruction of the forest trees leads to the invasion of the land by worthless brush and this not only makes the reestablishment of the forest difficult, but makes the control of fires infinitely harder and more costly than if a full stand of timber is maintained.

The stock argument of those who advocate the "light-burning" of forests is that fire exclusion ultimately leads to the building up of supplies of inflammable material to such an extent that the uncontrollable and completely destroying fire is certain to occur. The experience of the Forest Service in California, after 15 years or more of fire fighting, does not lead to any such conclusion. Large and destructive fires have occurred, particularly in this very critically dry year, but none of these fires approach in size or destructiveness some of the burns that occurred on light burned ground in the days when the control of fires in the forest was nobody's business. Records show that these early-day fires burned for months unchecked and covered entire major watersheds in the Sierra Nevada and Coast Ranges. The presence of nearly two million acres now in brush, which formerly supported a merchantable forest, is eloquent proof of the fact that such fires were just as destructive as the fires of today.

The existing policy of the Forest Service in fire prevention and suppression has not been reached on the basis of guess work or prejudice. It represents continuous and critical study of the possibility of wholesale forest burning. And the decision in favor of fire exclusion, taking all the factors into consideration, represents the only possible manner of handling our forests if it is desired both to protect what we have and to insure new and more fully stocked forests for the future.

These conclusions are substantiated by the findings of a disinterested committee of representative organizations, which after three years of field experiments failed to find or devise a fire protective system based upon the light burning theory which was more practicable and economical than that already in effect on the National Forests. (See State Forester's Report for 1923, p. 31-39.)

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POSITION OPEN IN MARYLAND FORESTRY DEPARTMENT

State Forester F. W. Besley, 815 Calvert Building, Baltimore, Maryland, has written the Forester as follows:

"A position is to be filled in the Maryland Forestry Department October 1, paying from $2000 to $2500.

"Applicant must be a technically-trained forester with some experience in fire protection work under eastern conditions. He must be capable of directing a State-wide protection system."

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SNAKE BITE REMEDY

By Will C. Barnes, Washington

In the Southwestern Bulletin of June 17 inquiry was made as to the value of the Permanganate of Potash outfits furnished some of our men to be used in case of snake bites; also, could anyone give any personal statements as to the use of these outfits.

Concerning the cases in which permanganate of potash has been used with success, two instances have happened within my personal knowledge, although not entirely under my own eye.

In March, 1910, while on the Cleveland Forest, I stopped over night with Ranger Brown, who always carried one of these kits in hisdsaddlebags. It had been raining nearly all day long. About sunset a man rode up to the cabin and informed Brown that his little girl had been bitten in the calf of her leg by a rattler. He implored Brown to come at once with his permanganate outfit and try to save her. Brown saddled up a horse and rode eight miles in a heavy rain, almost having to swim two streams on the way. He found the child in pretty bad shape, her leg frightfully swollen from the tension of the tourniquet. Brown injected permanganate into the wound and did all that he could to make her comfortable. The girl recovered, although she was very sick for some time. An odd thing about this was that a few days before the child's father, who was very hostile to the Forest Service, met Brown at some crossroads store in the Forest and spent half an hour cussing him out in regular bad-man style, threatening to beat him over the head with his six-shooter and run him out of the country. Brown, however, did not hesitate for a moment to go to her aid, in spite of the way her father had treated him.

In September, 1919, when I was visiting the Sierra Forest in District 5, Forest Ranger Blood, attached to Supervisor Benedict's office at Northfork, was bitten on the ankle by a small rattler the day before we reached Northfork. The leg was immediately tied up with a tourniquet and Blood's wife, who was with him, telephoned Benedict. He immediately sent the car out with a vial containing permanganate of potash. There was no hypodermic with the kit, but they scarified the wound with a Gillett razor blade and rubbed into it the fine pulverized crystals of permanganate. Blood, although very sick for about thirty days, eventually recovered.

In July, 1922, while at Yreka, California, the headquarters of the Klamath Forest, a young boy about ten years of age was out on the Forest near the town watching a force of men fighting a small fire. The boy ran down a dry wash the bank of which was just even with the top of his head. A rattler coiled on the edge of the bank sprang at the lad as he passed, the fangs striking him on the right side of his head just above the temple. He was hurried into town and the country scoured in search of a permanganate outfit, but one could not be found. Dry cupping was resorted to, but in spite of all that could be done the boy died the next day. The location of the wound prevented the use of a tourniquet, and it is possible that under the circumstances the permanganate remedy might not have saved his life.

The kits with hypodermic needle, bottle of permanganate crystals and bottle for holding distilled water with which to mix the crystals are sold by the Brunswick Drug Company, 501 North Main Street, Los Angeles, California, and are quoted by them at $18 per dozen. This is the only place in the United States, as far as my knowledge goes, where they can be procured.

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FOREST PRODUCTS LABORATORY

Wood Preservers Gain on Wood Decay: More wood treated than in any previous year and 34 per cent more than in 1922 is the way the wood preservers answer the question of how to reduce the forest drain.

A total of 224 million cubic feet of wood was treated - still a long ways from the billion and half of material that is now wasted and could be saved.

Other figures show that 50 per cent more creosote was used in 1923 than in 1922, and more treating plants are in operation.

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Laboratory a Patriotic Counsel of Perfection: "Judging from the data at hand your Laboratory is a patriotic counsel of perfection on many of the most perplexing problems us lumbermen have to solve and what more worthy cause could the Government lend its aid.

"It is more apparent each day that what lumbermen need is more intelligence as otherwise they will have wasted a large amount of their profits, the timber stand and trade.

"To me the real reason of so many 'wood substitutes' is lack of intelligent, efficient production and merchandizing on the part of the lumbermen themselves.

"One has to go outside of the lumber trade to get reliable data concerning same to properly judge the values - that condition don't exist in other lines."--From a lumberman.

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DISTRICT 1 - NORTHERN DISTRICT

Forests Closed to Smoking and Camping: The fire hazard is so great in District 1 that certain areas in 13 of the 24 Forests have been closed to smoking and camping. This is the most extensive use of the closing authority granted by the regulations that has yet been made in the District.

Tracts where no smoking is allowed are in the main confined to timber sales. Six different localities are closed to camping except under permit. In addition to the smoking and camping restrictions three areas have been closed to entry except under permits, these to be issued only in case of absolute need. One of these areas was closed as a part of an effort to stop incendiary fires and to catch those responsible for setting them. Everything possible is being done to reduce the number of man-caused fires, even at the expense of some inconvenience to the public.

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Another Example of Good Cooperation: On the Coeur d'Alene Forest the Winton Lumber Company is logging a tract of 480 acres of privately-owned land. Surrounding this is valuable National Forest and other privately-owned timber. So far the company has deposited with the Forest Supervisor for piling and burning the slash, in accordance with Forest Service practice, the amount of $2700. Additional funds are required, but the company is now retrenching on its expenditures on account of the fall in the white pine market to the degree of even cutting the salaries of its officials and permanent employees, so that it is hesitant about continuing with the work. Nevertheless, it proposes to deposit an additional $2500 in the Cooperative Work Fund for the Supervisor to use as far as it will go in disposing of the slash in accordance at least with the public requirements in the white pine type.

Progress! All ye scoffers take notice! The lessons learned as exemplified by the preachings of the Forest Service are not always forgotten, and the preachings do not always fall on barren ground in the ranks of the lumbermen.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Surplus Range: At the close of the season for approving grazing applications, the District Office gets an automatic report from the Supervisors showing where any surplus might be available for outside applicants. This surplus for the grazing season of 1924 shows room for about 38,000 cattle and 50,000 sheep; the sheep mostly in the southern part of Colorado on the San Juan and Rio Grande Forests.

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Lookout on the Job: Recently one of those smoke hazes which portends serious fire conditions either locally or from great distance, was seen across the eastern sky from the Colorado National Forest. The Ranger, Supervisor, and a member of the District office were on a grazing inspection trip and thinking that they might be called upon any minute for fire duty, endeavored to plan the trip so that some time during the day they would be in access to telephone. Needless to say, it was a day of anxiety and when the word was received that a telephone message awaited, the Supervisor was sure that they were in for fire duty. It was afterwards learned that the cause of the smoke was the explosion of the Mitchell gas well in the vicinity of Ft. Collins, sending up a column of flame and smoke 150 feet into the air.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

How Far Will Sparks Blow? What is believed to be a record for distance of a spot fire from the main fire was recently made on the Coconino when a spot fire started 19 chains from where a large fire was being driven by a high wind. This fire which occurred early in June burned over about 300 acres of recently cut timberland in spite of the efforts of 30 men who reached it when it was still small. Not only was the main fire difficult to control but numerous spot fires started and kept the men busy putting them out. One of these burned over about $\frac{1}{4}$ acre and measurements show it to have been just 19 chains from the nearest part of the main fire. If anyone else has any definite figures as to distances between main and spot fires, District 3 will be glad to hear of them.

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Porcupines Pine for Pine Bark: The Southwestern Forest Experiment Station at Flagstaff, Arizona, is learning some pertinent facts about the bark eating proclivities of porcupines. With the assistance of Dr. W. P. Taylor of the Biological Survey, porcupines are being kept under observation. Their appetites for bark are voracious. One small "porky" (weight 8 pounds) in a cage gnawed off 34 square inches of bark in a single night. Another one (weight 13.5 pounds) fenced into an area about 90 feet square, disposed of 196 square inches of bark in 6 days, an average of 33 square inches per day. In this time the porcupine worked on two large trees and 17 small ones, six of which he girdled. A third porcupine (weight 12 pounds) fenced into a slightly larger enclosure, was responsible for the removal of 300 square inches of bark in six days, an average of 50 square inches per day. In the process the animal worked on five blackjacks and 71 seedlings, of which latter, 39 or more than half, were girdled and killed.

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Do All Ex-Officers Report Fires? It is not uncommon in D-3 to meet former Forest Service employees who continue a sort of paternal care over the Forests after they become interested in other things. Just recently the Supervisor of the Crook has called attention to two outstanding examples of this class of assistance. Johnny Wight, now a member of the Globe, Arizona, police force used to be a Ranger on the Crook. Reporting forest fires is a regular hobby with him, it is said, and he doesn't miss many either. Recently, when the smoke of Deadman fire fogged up, Joe Woolsey, also a former Crook Ranger, was the first to report it. There must be something fascinating about a Service that holds onto men years after their names have been erased from the pay roll.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Smokers' Fires: It has been noted this year, both on the Boise Forest and on lands protected by the South Idaho Timber Protective Association, that smokers' fires have attained unusual prominence. The reason seems to be that on account of the extremely dry conditions and constant warning people have become very careful this year in properly extinguishing their camp fires. Smoking, however, is much more a matter of habit, and the carelessly thrown match or cigarette butt is in many cases absolutely not thought about at all. Supervisor McCain told Mr. Baker on a recent trip of a man who actually set a small grass fire by throwing away a cigarette butt while in earnest conversation with Mac regarding the necessity of carefulness with fire in the woods. Habits like this are indeed difficult to change, but at the same time we believe we are getting somewhere.

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PR Among the Dudes: Mr. Baker, on a recent field trip, had the opportunity of talking to 67 young boys who are spending the summer at the Valley Ranch, a "dude" ranch near Cody, Wyoming. They spend a month and a half, mostly in the saddle, traveling through the National Forests and Yellowstone Park. At the time Mr. Baker met them they were 50 miles from the nearest entrance to the park on the Teton Forest. Nevertheless, not one of the boys knew he was outside of Yellowstone Park or that any National Forest existed in that region; nor did they know what a National Forest was. This gave an excellent opportunity for a talk, and the boys were all very much interested.

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Advice to Campers: I'm very glad that Henry Ford is shipping flivvers free on board, that likewise, Mr. Chevrolet is turning hisn loose each day, as well as certain other gents who give us boats at small expense. I'm very glad because of that to find the proletariat, whose pocketbooks are darn near flat, can still go scooting here and yonder as free as any bloated bounder. I much admire in summer weather, to see the Joneses out together. They constitute a camping party, and every kid is brown and hearty. They boil their pot and warm their beans amid seductive sylvan scenes, then pitch their tents beneath the stars and leave the road to other cars, till Phoebus bids them cease to snore and rise to hit the pike once more. Oh brothers, leave your camping site as slick and clean as when you light. Amid your horseplay and your laughter remember who comes after, and do not curse the haunts of Pan with cracker box and salmon can. Yea, quench your camp fire that no spark, escaping from it in the dark, may scorch the scene you found so fair and leave a desolation there. I bless the honest careful tourist, alike the junkman and the jurist, but darn the man who scatters matches and spoils our nice green forest thatches.--Bob Adams.

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DISTRICT 5 - CALIFORNIA DISTRICT

Timberman and Forest Service Cooperate in Fighting Fires: To get the greatest possible efficiency in fire protection and avoid duplication of effort, timber owners of California and the Forest Service have worked out a system of cooperation whereby the protection of some 4,000,000 acres of private land in the Sierras is carried on by the Forest Service.

The Government maintains a patrol over these lands as well as its own, charging the cost figure of about two cents per acre. For suppressing fires that do occur, the logging companies place their forces at the disposal of the Forest Service. In this way duplication of patrol is avoided on the intermingled public and private land and adequate crews of men of known ability are made available for immediate dispatch to fires, a feature of great importance in fighting forest fires.

Private areas being logged are protected by the logging companies, and, as the slash on the ground increases the fire hazard, the cost per acre is naturally increased. Records of the California Forest Protective Association show that the cost of fire prevention to private owners of pine and redwood amounts to $250,000 per year. This does not include the cost of fighting fires which in dry years like the present will easily exceed the prevention costs.

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How About the "Beam" in Your Own Eye? In the present campaign for the prevention of man-caused forest fires a number of people have written the District Office calling attention to the fact that while we are urging the public to give up smoking in the woods our own Forest Service officers are in many cases bad offenders in this regard. In some cases this is true and in others it is not, but each of us knows whether the shoe fits or not. Isn't it about time that we were practicing a little of what we are always preaching? If ever there was a year when we all needed to toe the mark it is this one. Let's play the game fair and while we are at it, cut out the "tailormade" cigarettes entirely ourselves.--P.G.R.

Another Offender: Joe Barrett of San Luis Obispo was fined $600.00 by Federal Judge McCormick for negligently setting a forest fire and leaving without totally extinguishing it. Barrett set the fire in a stump on his mining claim to burn out a rattlesnake. Forest Rangers discovered and extinguished the fire which was slowly spreading toward heavy brush. The identity of the trespasser was discovered from the shoe prints near the fire area.

DISTRICT 6 - NORTH PACIFIC DISTRICT

Straight Talk: The following letter was recently sent out by a Forest Supervisor in the North Pacific District to all his Rangers. It is so clear and well put that it may be read with profit by everyone. It states some unpleasant but wholesome facts:

"Last fall a well-meaning Supervisor in this District, with a well-meaning deputy, ranger, and clerk, lost track of the costs of a lookout house and ran it up above the statutory limit of $1000. Taking a broad view of certain of the fiscal regulations, the excess cost was absorbed in various other more or less related projects. The discrepancies came to light, as they are apt to do. Result: The crowd took up a collection of something like $200.00 to repay the Government the amount spent over $1000, and the Supervisor was suspended for two months. They were all kept in suspense much longer than that, and feel, with good reason, that they have had a narrow escape from something worse.

This was all well meant. No one could possibly profit by it. The intention was to get the lookout house built somehow, and keep the work going. That is not good enough now-a-days.

Government business differs from ordinary business in this: When a board of directors make up a budget and allot money for different projects, that is a business arrangement. When Congress passes an appropriation bill, allotting money for various projects, that is a law, and spending the money in any other way is anything from a misdemeanor up. Business usage will not help us in trying to make adjustments between different appropriations. We have to stick to the letter of the law.

The Forester is responsible for the proper - that is the legal - use of Forest Service money. There isn't a doubt but that he intends to see that it is used right. There are a number of proper ways to make adjustments. It takes quite a while to get familiar with them. If you are in doubt about them, ask us and if we don't know, we will find out. But don't take chances; it isn't worth the risk.

When you take your pen in hand to make a voucher, consider what you would say about it if asked to explain it to a hard-hearted inspector with indigestion. You might find yourself doing just that. I am not going to suggest or encourage any illegal short cuts, ever. All these people who helped build the lookout house were partly responsible; but you will note that it was the Supervisor who got suspended."

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DISTRICT 7 - EASTERN DISTRICT

Volunteers Do Road Work: Thirty-one men and boys of Roosevelt, Oklahoma, spent a day recently in the Wichita clearing the right of way for a link in the new road known as the "Scenic Highway." These volunteers cleared more than a mile of road and prepared it for grading by a county road crew.

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Wichita to be Featured: That the Wichita will be featured in the advertising of the Rock Island and Frisco railroads next year is reported by B. M. Parmenter, a close cooperator with Supervisor Shanklin and a leader of the Lawton, Oklahoma, Chamber of Commerce. Mr. Parmenter recently arranged and carried out a tour of the Forest for Divisional Passenger Agent Price of the Frisco.

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Exhibit for Little Rock Fair: In connection with the concentrated effort to bring about State action in forestry in Arkansas arrangements are practically completed for a Department exhibit featuring forestry at the Little Rock State fair in October.

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TECHNICAL STUFF

A lumberjack with a broken leg was taken to a hospital for treatment. After the leg had been set, the nurse asked him how the accident occurred. He replied:

"You see, ma'am, it was this way: I was shyhooking for the Potlatch Lumber Company and I had only one ground mole. He sent up a big blue butt and she was a heavy one. I saw her yaw and yelled to him to give her a St. Croix instead of which he threw a sag into her and gunned her, and that broke my leg."

"Yes," the nurse replied, "but I don't exactly understand."

"Neither do I," said the lumberjack. "That darn fool must have been crazy."--Judge.

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Some time ago a letter was forwarded to the forest service of Chile, holding forth the benefits which Chile and all Chileans would derive from the planting of Pinus insignis (monterey pine, native of California) seed grown in New Zealand. The reply was somewhat of a stunner and contained amongst other things the following:

The average annual height growth that you mention in your letter is less than that obtained here, where the growth amounts to 9 to 12 feet per year during the early age of the trees. Also our volume increment is considerably larger than that of New Zealand.--Newsletter of the State Forest Service, New Zealand.

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Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

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COYOTES AND SUMMER SHEEP RANGE

By John H. Hatton, D-2

In the past few years, the coyote in Colorado seems to have changed his habits, due, no doubt, to the fuller stocking of the high mountain ranges with sheep. Where a few years ago sheepmen registered very little complaint about trouble with coyotes on the summer ranges, they now find them to be a very great menace. In fact, coyotes used to look forward with a sense of relief to getting away from the plains into the mountains. They have now become so bold in the mountains that daylight raids on young lambs are common.

To consider and attempt a solution of the problem as it affects two of the most important sheep grazing Forests in District 2, namely, the Leadville and Holy Cross, where something over 200,000 sheep are represented, a meeting was recently called by the Forest Supervisors of these Forests. This meeting was attended by sheepmen from Oregon, Idaho, Utah, and Colorado, representing ownership of about 100,000 sheep and fully $2,500,000 in property values - sheep and ranches. An organization was perfected which will be known as The Leadville-Holy Cross Stockgrowers Association. Funds were voted and paid in for cooperation with the local inspector of the Biological Survey for the purpose of beginning a campaign at once. Funds were also voted for 1925, and a three-year program of systematic destruction has been outlined. This, combined with a similar program on the White River National Forest now in force, will get real and lasting results in predatory animal control over a considerable percentage of the sheep ranges in Colorado. The meeting brought together sheepmen from various States and gave them an opportunity to exchange ideas on questions affecting the production of sheep under varying conditions. It was one of the most effective and outstanding meetings from the standpoint of interest, cooperation, and accomplishment ever held in the District.

The Leadville and Holy Cross Forests are important examples of the economic uses of forest resources. Seventeen years ago the Leadville represented a sheep authorization of 60,000 head, and many of these came to the Forest from other States through invitation from the Forest Service. These so-called foreign outfits had become fully established before important new Colorado demands were received. This Forest now represents an authorization of some 116,000 - nearly a 100 per cent increase - which, it is believed, can be permanently provided for under the recognized methods of improved use and management. During this period the cattle authorization has held almost steady, recording only a 10 per cent increase.

The Holy Cross territory as now represented has recorded an even more striking example of increased utilization. In 1909 this Forest showed a sheep authorization of but 25,750 head, including the Sopris territory now combined with the Holy Cross. For several years now about 93,000 to 100,000 have been provided for on this area, with a prospect of permanently providing for some 90,000. Based upon an annual gross value of $20 per head for the two Forests, which includes the value of the breeding stock, wool and lambs, we have more than $4,000,000 in livestock values represented, not to mention the ranch and equipment investments.

When we consider these values we are not so surprised at the readiness with which this class of stockmen responds to suggestions for cooperation, nor the ease with which ready funds seem to be forthcoming when the call is made. It needed in this instance but the timely suggestion for getting together at just the right time, and the well-directed discussion by the local Forest officers to launch a program of direct and immediate appeal and of large importance. It does not take the loss of many lambs at present market values to represent a fund out of all proportion to an assessment of 1½ to 2 cents per head of permitted stock. The elimination of losses, particularly in young animals, is the biggest single factor in successful livestock production.

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THE WASTED WOODS

The forest was blazing with fury amazing, the smoke wreaths were drifting like clouds overhead; the ashes were flying and heroes were trying to conquer the fire fiend, the monster in red. Great trees that were standing when Noah was landing his arkload of flivvers on Ararat gray, were falling with crashes 'mid cinders and ashes - long centuries growing, and slain in a day. And farms that were smiling, and landscapes beguiling were ruined and wrecked in the space of a breath; and homes that were lowly and kirks that were holy were lost in the ashes and grayness of death.

"Oh, how was it started," I asked, heavy-hearted, of William the warden, who watches the woods; "Some campers were reckless, boneheaded and feckless, they scattered their stogies and similar goods. They slung around matches in dangerous batches, they broke up their camps without quenching the fires; the wardens and rangers admonish such strangers, who laugh while the forest burns up and expires. The trees that were waving when Aesop was slaving, the trees that were ancient when Caesar was young, must fall in disaster since campers won't master the lessons we wardens have ceaselessly sprung. The trees that were splendid! Their glory is ended, they'll whisper no more in the rush of the breeze; still campers will chatter and shout while they scatter their smoldering snipes in the woodlands and leas."--Walt Mason.

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ANENT BOTANICAL MAVERICKS

By Daytonius, Washington

A member of the Washington office who chanced to pass the Forester's door a certain afternoon about a dozen years ago witnessed a peculiar performance. A large, florid, bespectacled man evidently well advanced in years was brandishing a stout walking-stick over the Forester's desk and shouting in stentorian tones, punctuated by flourishes of the staff and synchronous "ducks" of the Forestrial head behind the desk:

"What do you mean, Sir, by addressing me, the greatest living botanist, in this wise? Scientific work, Sir, is not done as one sweeps streets or 'turns out' pig iron!"

The black snapping eyes of Col. Graves betokened utter incomprehension; however, the mystery was soon explained. A thoughtless clerk had sent a letter to the Rev. Edward Lee Greene, D. D., LL. D., then consulting botanical expert of the Forest Service, asking that a certain package of plants be "identified right away, in accordance with the Forester's wish."

Haec fabula docet, as dear old Aesop quoth: Of the difficulties of identifying properly numerous National Forest range plant specimens some seem not to have the remotest conception. Satiric comment is sometimes heard as a result of delays in reporting on certain specimens. The facts are these: (1) The National Forests represent a still very largely unexplored and little known region botanically; (2) nearly every collection has one or more "stickers" or plants which are identifiable only with difficulty; (3) the wealth of botanical literature wherein American genera and species are treated, in every language spoken at Babel and invented since, is so appalling in volume and often so difficult of access, that the average person does not begin to visualize it.

This "making of many books" does not begin with Linnaeus' "Species Plantarum" in 1753 either. As old Dr. Greene has amply shown it is absolutely impossible to understand Linnaeus without understanding Linnaeus' own botanical foundation, and that takes us back to Pliny and Dioscorides at the dawn of the Christian era. Furthermore, the "types" of practically all the older American species are in Europe and often difficult of access.

The Forest Service is receiving the very finest cooperation in its plant work from the Bureau of Plant Industry. Mr. Ivar Tidestrom, Dr. A. S. Hitchcock, Mrs. Chase, Dr. F. V. Coville, Dr. S. F. Blake, Dr. CCarleton R. Ball, Mr. Paul C. Standley, Mr. William R. Maxon, Mr. W. W. Eggleston, and others are doing their best to give us prompt and efficient service. The burden of the work, of course, falls on Mr. Tidestrom. Mr. Tidestrom's policy is to push out the current work just as rapidly as he can. The ones that can't be branded right off with some sesquipedalian two-pronged name, and which for convenience we may term "botanical mavericks," are laid to one side. As soon as the current work is finished Mr. Tidestrom tackles a pile of these mavericks, but this work goes very slowly - often a day or two whole days must be spent on a single specimen and frequently the advice of specialists must also be sought. It is to be expected, therefore, that long delays will be unavoidable in reporting on certain outlandish specimens.

It should be stated in conclusion that Mr. Tidestrom finds that he can identify at least twice as many plants in a given time as he could ten years ago. This is due, in part, to greater experience but, even more, to his gradually keying out the species, genera and families for his various proposed floras.

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WASHINGTON NOTES

Publicity Catches Them: Great is the value of publicity in reaching those genuinely interested in forestry problems. Upon the release of "How the United States Can Meet Its Present and Future Pulpwood Requirements" press dispatches were prepared and distributed to the large news agencies. Practically every daily newspaper in the country carried announcements of the publication. The effectiveness of this publicity is being proved by letters received in Washington. A group of five letters arriving in the same mail illustrates the point. W. S. Kirkpatrick, Portland, Oreg.; National City Financial Library, New York City; Bangor and Aroostook Railroad Co., Bangor, Me.; The Dallas News, Dallas, Texas; and the Eastman Kodak Co., Rochester, N. Y., all wanted copies of the bulletin.--C.W.B.

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"One Touch of Naturs Makes the Whole World Kin;" The cancellation stamp on a Canadian post card recently received showed a forest fire slogan in both English and French.--L.M.H.

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"How Should a Given Stand of - Balsam FUR - be Cut?" the Official Record of August 13 eloquently asks. This may be a mistake for our old friend Weiss's new product, balsam wool, or it may be some new mammal just discovered and described; but in any event we recommend the shingle bob and the clio clip as the latest.--W.S.

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Valuable Cooperation: The slogans "Do not Throw Lighted Cigarettes or Cigars Out of Car Windows," "Help Prevent Forest Fires - It Pays," and "Be Sure Your Camp Fire is Dead - Then Bury It," are being printed on the time tables of the Union Pacific.

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FOREST PRODUCTS LABORATORY

Decay Causes Huge Timber Losses: Over nine billion board feet of forest products in service, almost one-sixth of our annual cut, are lost annually through decay, according to estimates by R. H. Colley of the Forest Pathology office located at the Forest Products Laboratory. Of this amount he estimates that almost five and a half billion board feet could be saved through various measures of decay prevention; at current prices of lumber this would come to over $200,000,000.

The greatest losses are in lumber and dimension material, ties come second, and if fence posts alone were adequately protected, over a hundred million board feet could be saved each year.

These items are from data originally prepared for the McNary committee.

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Can't Squeeze Fungi to Death: Pressures of 2,500 to 10,000 pounds per square inch failed to kill fungi in a patented tie which the inventor sent with the claim that pressures of 5,000 pounds per square inch would kill fungi and prevent any future growth.

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DISTRICT 1 - NORTHERN DISTRICT

A Genius with a Bottle: Ranger W. H. Daugs of the St. Joe prepared a very remarkable and unique exhibit in connection with Forest Protection Week. This consists of a gallon bottle with a narrow neck, within which is a miniature forest made out of clay, twigs, and other small pieces of material. A ranger station with its pasture and flagpole are depicted at the foot of a high mountain, on the top of which is a lookout. A settler's clearing is shown with fences, stumps, a small garden, and cabin. Telephone lines and trails can be discerned, as well as pasture fences. Surrounding the settler's clearing is a patch of burned timber. The ground is blackened and nothing but blackened snags remain. The settler's cabin is slightly singed. The bottle is corked with a wooden plug, which is locked on the inside. The whole attracted considerable attention wherever exhibited. Its unusualness and the natural query of "How did he do it?" provided a new vehicle for attracting attention to the fire prevention problem.

Mr. Daugs many years ago was a sailor in the German navy and there learned the secret of building full-rigged sailing vessels inside bottles with very narrow necks. When asked how he does this he merely grins.

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Incendiaries in the Pinkham Creek Country recently set a line of fires through the forest for a distance of 7 miles. Probably 150 separate fires were kindled. That locality has been the center of incendiarism for ten years; some 50 fires were set in 1921, and about 80 in 1922. Suspicion attaches to some of the local residents, but all efforts to apprehend the culprits have failed so far. In order to prevent the further setting of fires, and if possible to catch the offenders, a heavy patrol has been thrown into that locality and the area has been closed to entry. Opposition to closing on the part of the local residents is being met with, as it naturally occasions some inconvenience. The guard consists of 14 men - 2 in a camp. They are well armed and ready for any emergency, and developments are eagerly watched for.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Planting on the Mount Herman Burn: This burn covers 10,000 acres and the east edge of it is located about four miles from the Monument Nursery. A new road was started last year that eventually will go completely through the burn to Woodland Park and make the area quite accessible. For the first time nothing but seedling stock was used in the Pike operation. A total of 1579 acres was planted at a cost of $8.86 per acre. The average number of trees planted per acre was 634. This is the largest area ever planted on the Pike Forest in a single year and the cost is from $2 to $10 per acre less than the operations of the past ten years. This reduction is due to the use of the seedlings and to the accessibility of the area.

Unfortunately, since the planting was completed the east slope of the Colorado Rockies has suffered a severe drouth, the precipitation for June at Monument being 0.26 of an inch, whereas the average is 2.02. A heavy loss has been suffered already and if this drouth continues additional losses will occur, but it is believed that sufficient trees will survive to make the planting a partial success.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

New Grazing Rates Meet Little Opposition: Meetings with stockmen's associations have been held by Supervisors on all D-3 Forests for the purpose of getting the views of the livestock industry on the results of range appraisal. They have been well attended by practically all of the large owners of stock grazed on the Forests. The need for range appraisal and how it has been done have been frankly and fully discussed. The result is that almost without exception the stockmen have approved the Forest Service policy of disposing of National Forest forage at its commercial value, and also the methods used by the Forest Service to determine that value and the tentative individual rates arrived at by the computations of the range appraisal. Little individual discrepancies are being rapidly worked out. Further, the State Cattle and Horse Growers' Associations of Arizona and New Mexico and the Woolgrowers of Arizona, in annual convention, have passed resolutions endorsing the new grazing regulations and the results of range appraisal.

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Should Cut Down Fire Risks: The Cady Lumber Company of McNary, Arizona, is converting all of its coal burning logging engines into oil burners. This company is at present operating on the Apache Indian Reservation but also has a sale on the Sitgreaves Forest which will be reached in the not distant future. Logging locomotives operated with oil for fuel should be much safer than coal burners.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Reclassification and the District Ranger: With a salary comparable with similar positions in other lines of business, the District Ranger's place is one that is destined to become more and more attractive. While work on a Ranger District will always be considered as a requisite of men who go into the higher positions in the Service, it will not be viewed by many as a stepping stone to such higher positions but will, in itself, be considered and accepted as a position of dignity and responsibility. There is no position in the Forest Service that provides an equal opportunity for the practice of true forestry. No other position affords the same degree of actual contact with problems involving the fundamental principles of forestry. No other position affords the same opportunity for visualizing a goal and being able to build toward it, or the same degree of satisfaction in being able to observe the results of well thought-out plans and properly directed effort.

The future Ranger will be inclined to view his position in the nature of a life's work, and will feel justly proud of the responsibility that he has been called upon to accept. He will constantly strive for improvement on his District and for the advancement of himself in the technique of his chosen work. The Ranger who appreciates the possibilities of his job is in a position to render one of the greatest of services to posterity. A sense of pride in his work, loyalty to the organization, and a spirit of comradeship with his fellow workers have kept this determination fired up in the past, even though the Ranger has been associated with men in other lines of work who were better paid and had less responsibility.--W.W.B.

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DISTRICT 5 - CALIFORNIA DISTRICT

Deficient Rainfall Intensifies Fire Hazard: One of the outstanding factors in the critical fire conditions which this year confront the forests and fields of California is the marked lack of precipitation. Only three times in the last 75 years has the annual rainfall of the State been as deficient as during the present season, according to report of Edward H. Bowie, meteorologist of the Weather Bureau. The rainfall of the present season totals 11.62 inches, or 10.6 inches below the normal precipitation of 22.22 inches. This deficiency is all the more serious because of the fact that the rainfall last year was only 11 inches, or less than half of normal. The dryest season on record was 1916-1917, when the precipitation was but 9 inches.

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Still Loyal: About the only pleasant feature of our present fire situation is the way in which former members of the Service have rallied to our support in this trying time. By letter, wire and through personal application, many of the "old timbers" have offered their services, and a number of them have been back on the fire line with their comrades of former days.

This certainly shows that forest work has produced in most of us a love for the Forest Service that time does not eliminate.

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Aviators to Report Fires: The Ninth Army Corps Area officers have instructed all aviators as they flyoover forest territory to watch out for fires. If none are found, they so report to the nearest Forest officer on their return. If fires are spotted they are instructed to report by wire the location of the fire immediately on landing.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Attention Forest Rangers: When Ranger James McKenzie of the Entiat District of the Wenatchee was in the office recently the writer learned of the great help that a Forest Ranger's wife can be and very frequently is. Beginning in the middle of August, 1922, lightning storms set many fires in the Entiat ranger district. The fires started by these storms kept Ranger McKenzie and his protective assistant away from the ranger station almost continuously for several weeks. McKenzie left his wife in charge at the station and in two days' time 15 fires were reported to her. She was alone and had entire charge of getting men, pack outfits, and provisions together, and of hiring horses to take them to the fires. According to Mr. McKenzie she did better than any man could have done, including himself. He wasn't telling this for publication, but we hear too little of the Rangers' wives, of whom there are many, who very probably understand the problems that present themselves and who are able and willing to do their bit "unsung and unpraised" as it were.

Mr. Springer, who was central fire dispatcher at Leavenworth at that time and reported many of there fires to Mrs. McKenzie, states that he was reluctant and ashamed of having to report so many fires to her, knowing she was alone, but on the other hand, knew that she would cope with the situation better than anyone else and did not feel at all doubtful when told by her that she would get some one to go.---A.H.S.

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DISTRICT 7 - EASTERN DISTRICT

Timber Sale Business on the Arkansas Forest continues to grow. At the present time a unit in the Hot Springs Working Circle, containing approximately 8 million feet, is being advertised. This unit is readily accessible to the railroad at Hot Springs. A sale of approximately 9 million feet in the Oden Working Circle has been approved in the District office. In addition to these units Supervisor Plymale has received application for several smaller chances in other working circles.

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Artillery Men Visit the Wichita: Three battalions of field artillery from Fort Sill, Oklahoma, have just completed a four-day hike through the Wichita National Forest. To each man of the three battalions the military authorities at Fort Sill issued a leaflet describing the National Forest, explaining its purposes and setting forth the simple rules established for the protection of the forests and the wild life as well as for the convenience and guidance of the visitor.

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Road to be Built to Summit of Mt. Scott: Organization of a company to construct an automobile highway to the top of Mt. Scott within the Wichita Forest was tentatively perfected this past week by a large number of Lawton business men. More than 30 of the city's progressives have signed up and more are expected to participate in the company's plans. Arrangements have been made to apply to the Department of Agriculture through the Forest Service for permission to build the road. It is believed that a toll road would improve the Wichita National Forest as a recreational center and would pay good returns on the money invested. A number of years ago the Forest Service granted a permit to private interests to construct a cog railway to the top of this peak and to establish a hotel on the summit. This project was never carried out.

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Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

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LAW ENFORCEMENT AND THE COURTS; THE REMEDY

By E. S. French, D-3

It is not every act prohibited by the letter of the law that, as a practical matter, can be successfully prosecuted. The law is not an exact science. You cannot measure violations of the regulations with a scaler's stick as you would a log, nor can you "put a transit" on them.

The absence or presence of evident culpability enters in a large way into the administration of the law. This is where the courts come in. Anyone can read the average law and tell you whether it prohibits a given act. But it is in the province of the courts and juries to say when a crime has been committed or a civil wrong done.

Not all trespasses upon our Forests are offenses, Forest officers to the contrary notwithstanding. It is so easy to find "Thou shalt not" in the Manual and then condemn the courts for not putting away for sixty days or so the individual whom you have elected to enjoy the hospitality of the sheriff or marshal.

We get from the courts the same justice that is dealt in other classes of cases. We are not discriminated against in any way. But there are long delays in the law and the defendant always gets the benefit of the doubt (as he should). Thus, in our law enforcement activities, we do not get the results needed to engender a healthy respect for the regulations. A thousand and one excuses and alibis defeat our ends. That there was a trespass, no one denies, but either the judgment comes so long after the infraction of the regulations (a year, year and a half, two years, etc.) that the effect is to a large extent lost, or the defendant kicks up a lot of dust about collateral matters and succeeds in getting off scot free or at a cost far less than the value of the benefits derived from his trespass.

Much has been written on this subject by able men of the Service. Numbers of Forest officers have quit the Service solely because they did not and could not get reasonably prompt results in law enforcement. Some of them have told me so. What, then, is the remedy? It must be one that is in our own hands. We don't want to have to enlist outside aid as from the courts.

My proposal is impounding or/the allied agistors' (or pasture) lien. I have talked impounding for a couple of years. It is very popular with the Rangers. Some older heads deprecate it as being impractical. Legally, it has been suggested that impounding might be attacked in the courts as being beyond our authority, i. e., not incident to the regulation of "occupancy and use" of the Forests. Beyond doubt, the salutary effect that impounding or the assertion of the lien upon trespassing stock would have upon the owners and the community would be 100 per cent law enforcement. In short, the local officers would seize the stock and hold it for the payment of the trespass damages by the owner, or would proceed to sell the stock after advertisement in default of such payment. The first objection advanced is that of a place to put the stock while holding it. That I answer by saying that the Ranger will find a place if he has a bad trespass problem and is given authority to employ the summary method of seizure of the stock.

Another objection is, "What will you do with the stock if the owner does not claim it or no one can be found to bid it in for the trespass charges?"

Did you ever have a horse or cow that strayed out into the village street, and did the poundmaster (or in a more progressive community, the town marshal) seize the said critter or critters and did you tell him to keep the stuff and did you procure all your neighbors' consent to refuse to bid upon them when they were offered for sale? Or did you hustle around quick, find out how cheap you could settle, and get your animals back in the pasture where they belonged? Of course you did the latter, and so would any other man who had an animal that was worth retrieving. You would not rush to a lawyer, put up $100 retainer, and cause him to start proceedings which would test the constitutionality of the appointment of the poundmaster or the law under which he was acting. So with us of the Forest Service, if we would employ some of these summary methods that are at our hands by virtue of State impounding and lien laws, our success would be like that of the poundmaster. If in one-tenth of one per cent of the cases, some fellow would come along who desired to take us a round or two in the court, we would have the might of Uncle Sam behind us and we could surely give him an interesting scuffle. At least we would have the advantage that the burden in court would be upon him to show that we were acting unlawfully in impounding his stock or impressing it with a pasture lien. When we "trespass" a defendant in court, all the burden is on us. It makes a lot of difference who is carrying this burden.

Impounding and holding for damages trespassing stock is not entirely new. Some few courageous Forest officers have tried it from time to time, and always, so far as I know, with success.

It remains for this procedure to acquire official sanction before it can accomplish its best results.

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Impounding trespassing stock under State laws has always been sanctioned by the Service. It has failed utterly, however, when used on wild unclaimed horses.--W.C.B.

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PIONEERING WITH U. S. D. A. 600

By A. E. Wackerman, Lake States For. Exp. Sta.

On June 24th of this year U.S.D.A. 600, a Ford, was acquired in Lansing, Michigan, by the Lake States Forest Experiment Station and at once the slow 15-to-20 mile-per-hour-breaking-in-drive northward was begun. Our destination was, in general, the Upper Peninsula of Michigan.

The first day saw us some 100 miles to the good and our log showed 23 inquiries, hails, questions, and interrogations as to what our license meant. The white background with the bright blue figures proved to be a marvelous point of contact with other travelers and local people in this tourist-infested region.

Apparently we are still traversing pioneer trails as far as a U.S.D.A. license is concerned, for as we pass curious eyes seek the meaning of the strange license plate and often arguments arise as to what must be the home port of our little Ford. Some say, "U.S.D.A.; that means Alaska." Or again, "Delaware (or Dakota) you don't see many of those cars around here." Others have thought that we had a special tourist license issued by the Federal Government for interstate touring, or perhaps that we had some sort of an export license permitting us to drive a car for export. There are probably still wilder conjectures which never reach our ears.

In this region of the Lake States where "foreign" cars are frequent in the summer it seems that the license plate is the most conspicuous part of one's car. All eyes seem to seek it out, and if it is strange to them they must know all about it. Small boys seem to be the most observant in this, but old men gathered around a country store or small town barber shop bench run them a close second.

Whenever we are questioned about the meaning of U.S.D.A. we gladly tell them all about it and that we're with the Forest Service, Lake States Station, and all that and that we're working to find out how fast the jack pine grows around here and so on. And before we know it we have a new recruit who knows just a little more about this forestry business than his associates and who prides himself on being able to talk "authoritatively" to his friends. All of which aids the cause here in the Lake States, which needs all the aid it can get.

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ANTELOPE ON THE INCREASE

By Will C. Barnes, Washington

For a good many years it has seemed as if the antelope were doomed to extinction. Not only were they disappearing on the public domain, but wherever the Government undertook to raise them in pastures or game preserves they did not thrive. For ten years or more we tried to get a start on the Wichita but without success. Recently, however, we seem to have been doing better. We now have a total of 17, young and old. The herd seems to be well acclimated and we hope will continue to increase.

An interesting thing is that the three females have each had twins in 1923 and 1924. The Biological Survey, in order to secure additional numbers, last year, made arrangements with a ranchman in northwestern Nevada, where there is a large number of these animals on the public domain, to capture young antelope and raise them on the bottle. The Survey reports that they now have 38 young bottle-raised antelope which are doing very nicely. When these animals are a little larger they will be shipped to three different Game Preserves. One will be the Grand Canyon Game Preserve, where there is a large well-grassed mesa on which they should thrive, provided the wild burros do not chase them out. Another lot are going to the Montana Bison Range near Ravali, Montana, and another to the Niobrara Game Preserve in western Nebraska.

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WASHINGTON NOTES

Mattoon's Six Commandments: How to grow pine timber in the South is forcibly set forth by W. R. Mattoon, Extension Specialist in the Washington office, in the following brief rules. They have been published by the Georgia State College of Agriculture with minor changes. They would serve admirably in many other regions.

1. Cut no promising trees measuring under 12 inches on the stump.

2. Cut low stumps (12 inches or under); save the best timber.

3. Leave two bushy-topped seed-producing trees on each acre.

4. Take care not to injure the young timber.

5. Pull the tops of all cut trees away from living timber; save it from the worms and possible fires.

6. Keep out fire at all times.

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Visitor: Prof. R. M. Tisinger recently called at this office to get acquainted with the work of the Forest Service and secure literature preparatory to establishing forestry in the agricultural department of the Heping Christian College, Yochow City, Hunan, China. Professor Tisinger has been for several years engaged in teaching Vocational Agriculture in Virginia. His new field is located in Central China on the great Yang-tse-kiang, where there are forests.

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A Correction: The item entitled "Universal Volume Tables for Measuring Standing Timber" in SERVICE BULLETIN of July 7, was erroneously credited to S. T. Dana. The author of that item is C. E. Behre, Northeastern Forest Experiment Station.

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DISTRICT 1 - NORTHERN DISTRICT

Mountaineers to Visit Mission Range: The Montana Mountaineers started August 17 on their second annual outing to the Mission Range, where they will explore additional country. The trip was featured this year by the State University Summer School as a part of its program of outings. The personnel of the party is very largely made up of educators, and includes people as far away as Boston, Ohio, and Chicago.

At the request of the club and the director of the University Summer School, Mr. Shoemaker will again act as field director of the trip, point out on the ground the work of the Forest Service, and give talks on forestry in connection with the evening lecture program. A Forest Service lookout station will be visited, and the work of forest protection explained by the lookout. The Forest Service has this year constructed a trail to Lagoon Lake, the site of their permanent camp. This portion of the Mission Range was first explored less than two years ago, but is already recognized as one of the most scenic regions in Montana.

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"Save the Forests - Protect the Highways" is the title of an illustrated article by H. T. Gisborne of the Priest River Experiment Station, published in THE HIGHWAY MAGAZINE for August. Under this heading the writer shows the relation of good highways to forest protection, and dwells on the experiments being conducted by the Forest Service, designed to improve the effectiveness of fire control measures. It is an illustration of how the forests and the work of the Service can be tied into almost every movement having to do with the public welfare. Read it for yourself.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Fire Cooperation in D-2: In the midst of the worst fire season experienced in Colorado in 15 years, it is a source of great satisfaction to find the resident public of the State behind the fire protection game in a solid unit. The larger newspapers have offered the use of their publications in any way possible to further the cause of education and cooperative protection. The news of three small closed areas along the Continental Divide has been picked up by every public agency, in fact, welcomed and voluntarily given the most thorough publicity.

Perhaps the most striking instance of public cooperation was a telephone call received from a citizen of Denver who was starting out on a camping trip in the vicinity of the Devil's Head Lookout. This man stated that he had observed abandoned camp fires in this region and, knowing nothing better to do, had put them out in every case. He was a little concerned as to whether or not he was trespassing on the rights of others in doing so, and was eager to know if there was not some more effectual way in which he could cooperate in meeting the present crisis. On being informed that evidence which would make prosecution of the offender possible was the dearest thing to the heart of the Forest Service, he pledged himself to act in the capacity of a volunteer guard during his trip to the hills. Although the timber is still as dry as oven-baked excelsior, all fires to date have been grabbed, and it is hoped that through the present combination of public and private efforts it will be possible to carry on until a change of weather reduces the fire hazard.

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D-2 Loses Engineer: We regret that F. D. Mendenhall is leaving the Service to go into business with his father and brother in Florida.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Range Reserve a Rat House: The Biological Survey has been working on the kangaroo rat pests of the Jornada Range Reserve, and 78,000 acres of badly infested land have been treated with poison. On the whole area 204,211 dens, or an average of 3.21 dens per acre, were found. Portions of the range reserve were so badly honeycombed by rat dens that, in addition to the loss of forage, travel was dangerous because of the hidden pitfalls. Frequently in the early spring thin cows dropped into the covered holes and lacked the strength to get out. The cost of the treatment was .0193 cents per acre, or .0073 cents per rat.

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Hurrah for Two Tourists! Recently Supervisor Kimball of the Tusayan came across a fire burning merrily near the road to the Grand Canyon. He attacked it with vigor, but the fire was more than a one-man job. Thoughts about tourists in general, one of whom was undoubtedly responsible, kept pace with the Supervisor's energetic work on the fire line. Suddenly a car stopped by the roadside and its occupants, two tourists, entered into the fire fighting with a will. The blaze was soon out, on the ground and in the Supervisor's mind as well. Kimball says, "Hurrah for tourists that have forest protection in their hearts."

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Honorable Mention: In spite of the various objections raised against the proposed policy of citations for meritorious work, I want to cite a case where some Forest officers did a splendid piece of work. I won't use any names; so no one will have a chance to get a case of "swelled head."

Last December an Assistant Supervisor, whom we will call Andy, took a couple of Rangers and temporary men, went back into the Salmon River country, and stayed until spring; not trapping predatory animals, but building bridges. When they came out in the spring they had four bridges ready to use, all workmanlike jobs if I am any judge. The shortest bridge is 60 feet and the longest is 180 feet, the average length being 125 feet. The longest span used is 70 feet and this length was used on three of the bridges. Quite a piece of work, wouldn't you say? If you think not, try it some time.

The Forest Service stands ace-high with the old-timers along that river, but I think that no single thing the Service ever did impressed them like the winter bridge building. The funny part about it was that the men who did the work didn't feel imposed upon and Andy has more applicants than he can handle for next winter.--C.F.E.

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New Use for Aspen: Other Forests have their aspen boxwood and excelsior factories but, so far as we know, the La Sal is the first to have a mill convert aspen into shingles. Mr. Coleman, the operator, states that he thinks the aspen shingle is a better product than the shingle made of spruce or pine. He points to the house which, two years ago, was shingled with aspen and spruce. The spruce shingles, though yet good, show much more the ill effects of weathering than do the aspen shingles which have the appearance of being brand new and are not the least bit curled or twisted.

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Central Idaho Forests Closed to Smoking: The District Forester has mailed out an order closing to smoking, except in places of habitation, the eight National Forests comprising the Central Idaho group. This action is taken under Paragraph H of Regulation T-1 to meet the present critical fire condition in that section.

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DISTRICT 5 - CALIFORNIA DISTRICT

Catch 'Em While They're Young: Not long ago thirty students of the R.O.T.C. organization of the Hollywood High School made a trip into the Angeles National Forest, built a number of camp fires, and left seven of them burning. Supervisor Charlton's office wrote a letter to the principal of the high school calling attention to the seriousness of this offense and emphasizing the necessity of teaching the students to be careful with fire. The result was that, although Forest Protection Week had come and gone, the bunch of boys who were responsible for the fires, in order to square themselves, immediately inaugurated a fire prevention week of their own at the high school, and entered into it with a will. Some particular phase of fire prevention or suppression was featured each day of the week. The fires themselves did no damage, fortunately, but the campaign which resulted will spell much for forestry in days to come. It worked so well that the suggestion was made that a similar campaign be conducted in all of the Los Angeles high schools before the closing of school.

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Why Not Let Out A Seam? Here is the first objection received to our present system of registering all people entering the National Forests. It comes from the owner of a fashionable riding academy and reads as follows:

"A number of my patrons, mostly ladies, have complained that their lives were endangered on account of being required to dismount at the entrance of the canyon. A great many lady riders find it necessary on account of tight fitting breeches to mount and dismount at mounting blocks, and when they find it necessary to dismount, on account of their horses not standing still, they have a great deal of trouble in mounting."

"When one is past, another
care we have;
Thus woe succeeds a woe,
as wave a wave."

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Fire Prevention Campaigns: One of the most encouraging things that has occurred in this District in many years was the starting in June by agencies entirely outside the Service, and at no suggestion from the Forest Service, of the "Stop Forest Fires Association." The idea of such an association was originated by the Klamath County Chamber of Commerce and is now being sponsored by the Oregon State Chamber of Commerce for the entire State. The drive opened on June 30 and ran for two weeks. During that time an intensive membership campaign was put on. The whole plan is to "sell" the idea of care with fire to the man on the street. A similar organization was put over in the State of Washington, called the "Forest Fire Prevention League," and backed by the Seattle Chamber of Commerce. Such a campaign cannot help but do a great deal of good in awakening the average citizen to what a toll forest fires are annually taking of the forest wealth of this country.--J.D.G.

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Expert Assistance: While writing letters of instruction this spring Ranger Wehmeyer made a thorough job of it by writing the following letter to Mrs. Wehmeyer:

"Dear Madam:

You will be located at Conconully R. Sta. Your duties will be that of telephone operator, cook, nurse, gardner, housewife, and assistant fire chief. Familiarize yourself with all the business of this, the Conconully, and the Loomis Districts, that in the absence of the Ranger you will be qualified to carry on the work of administration. Become acquainted with all the parties on the Okanogan, Loomis, Twisp and the Muckamuck-Salmon Meadows telephone lines, that you may further your efficiency as assistant fire chief. Under no circumstances leave the house, day or night, or in any way neglect your duties as telephone operator as this interferes with the business carried on over various telephone lines. In spite of the fact that the baby is crying from neglect, the washing a week behind, the dinner burning, chickens in the flower bed and range cattle in the garden, you must always maintain a cheerful disposition when dealing with the public. Keep your housework in order and maintain the neatness of the station grounds.

It is expected that your salary will be doubled over that of previous years. Very truly yours, F. F. Wehmeyer, Ranger."

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DISTRICT 7 - EASTERN DISTRICT

Pisgah Receives More Publicity: The city of Hot Springs, N. C., has recently issued an interesting little six-page illustrated folder in which Hot Springs is featured as the Northern Gateway to the Pisgah National Forest. About half of the descriptive material in the folder is devoted to the National Forest and the publication is convincing evidence that Ranger Larenzo Jared of the French Broad District of the Pisgah is not overlooking any bets in the way of effective public relations work.

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Excursion to Wichita Forest: Between 500 and 1,000 people from Dallas, Fort Worth, and intermediate points visited the Wichita on Sunday, August 17, when the Rock Island Railroad ran a special excursion train from these points to Lawton. The excursion was run by the Rock Island as an experiment to determine whether such ventures with the Wichita National Forest as their objective would pay as a regular part of the railroad's passenger traffic service. In order to back up the efforts of the railroad and to advertise the locality, the various civic organizations of Lawton hauled the excursionists to the Forest at a nominal charge and will donate the proceeds for the construction of a swimming pool dam within the Forest.

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Service Bulletin
U. S. FOREST SERVICE
(Contents Confidential)

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FOREST SERVICE SHORTAGE OF GOOD SADDLE STOCK

By K. C. Kartchner, Manzano

In the SERVICE BULLETIN of June 23, Parkinson again brings up the "more and more difficult problem of securing good saddle horses." He refers back to Headley's item "Who Wants a Government Horse" in the BULLETIN of April 7. The question of Government breeding and ownership of Ranger horses, or private breeding for sale to Rangers is an old one, having been considered periodically in D-3 at least since 1914 or earlier.

As a matter of fact, aren't we attempting to cross "Red River" long before we get to it? Let us think back over our acquaintances and point out the District Rangers, yes, Assistant Rangers with three months or more service, who have been handicapped for lack of horses perfectly good enough to handle their districts. Out of forty odd Rangers I have known on four Forests, I am unable to point out a single case where horses were lacking in numbers and very few in quality. Perhaps this is not typical of the Service as a whole. If not, I should say the problem, if we have one, is local rather than Service wide.

As to Government ownership, we do not, in my opinion, want to further burden the property records, incur the needed additional inspection to make sure that horses are being handled properly, bring about the inevitable dissatisfaction of Rangers with individual tastes, nor launch into the horse trading game at which I'm afraid we would largely find ourselves coming out at the end of the horn. This has no reference to the purchase of saddle, pack or work animals for use on special projects such as grazing reconnaissance, bad fire areas, etc., where salaries are not based on the employee's furnishing of stock and where owning is cheaper or more effective than hiring.

Even the breeding of horses by stockmen for sale to Rangers has not proved worth while in this District. When notified through the BULLETIN, for instance, that Vic Culberson of Silver City had so many very desirable young horses for sale cheap - $50.to $75 each - practically every Ranger in Arizona and New Mexico had to either say that his local horse situation was too simple, he already had an adequate number of good horses or mules, that the special trip to Silver City including the time and expense of transporting animals purchased were entirely out of proportion with the advantage to be gained, or (in some instances) that anyway the Culberson horses were "flat footed" from being raised in low country and were, therefore, unsuited to the high rocky country which makes up the major part of our Forest areas.

A word about Mr. Headley's question of excessive cost to the Government transporting horses of transferring Rangers. What about the excessive cost of distributing Government horses from breeding ranches to the various Ranger stations? Would not this item, exclusive of breeding and raising, far exceed the expense we now have in transferring Ranger-owned horses?

Roughly stated, the average price of suitable Ranger horses has run here in the Southwest from $50 in 1910 to $100 in 1920 and back to $60 at the present time. Not such a great investment for one to three head. As to financial losses in disposing of horses incident to transfers, it is my candid opinion that the average Ranger actually makes a profit - say nothing of the satisfaction he gets from private ownership and the privilege of making what he wants to out of young horses. One Ranger started out by paying $145 for three young horses. After two years on a district he was transferred to the office where horses were no longer needed. He sold the three head for $310, or a net profit of $141, allowing 8 per cent interest on the original investment compounded annually. He actually doubled his money in two years!

True, other Rangers have not been so fortunate. But those actually suffering losses are in the great minority and I would say here that in most cases they have not followed the time-worn rule of buying sound young horses on the up grade at reasonable prices rather than older ones at somebody's "pet horse" prices.

Some may say, if there is such a profit in horses why wouldn't it be good business for the Government to own them? It would not for this reason: the good ones would not be sold, the poor ones would be sold or traded at a loss, and our Ranger districts would be no better supplied with the proper kind or number. Let's leav' er as she is.

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SERVICE STRIPES AND CITATIONS

By Ranger G. B. Anchors, Florida

It seems to me that all that has been said through the SERVICE BULLETIN about Service stripes and citations has come from the "higher ups." Why not a few words from a private in the rear ranks?

If Service stripes or citations are to be given, why make the goat out of the field force? Why stop with the men in the field? If it is good for one certainly it would be good for all. I do not think the field force would want something that the "higher ups" could or would not partake of.

I personally think that the military branch in which I had an opportunity of serving for three years and where the Service stripe was accepted as a reward for service, is the proper place for such stripes. To my mind, citations should be very much hidden from the public if they are to be given at all. Citations in some cases might be good and proper. Personally I should not want to be brought from the rear ranks to be shown off to my brother Forest Officers for work that had been my duty to perform. I am sure none of us forget the oath of office taken when entering the Forest Service.

Why not combine Service stripes and citations in one in the form of a flag or pennant of forest green, the service to be represented by white stars, one for each year of service? Let citations be shown by a change of the color of the star for the years in which they occur. If citations are divided into two classes, blue and golden stars could be used. The stars might be sent to the individual officer annually from the date of his entry into the Forest Service and the pennant might be kept in the Forest officers headquarters where it could be seen by visitors.

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FOOD FOR THOUGHT

E. W. Tinker, D-2

From a hint here and there, in the form of a question or a statement from the Forester's office and elsewhere, it would seem there is a suspicion that the field may be a little lacking in interest and enthusiasm for forestry in the woods. That timber sales in many places have been relegated to the background for more pleasant but less tangible things. In fact, within the past year I have heard from several men ungarnished statements that this was indeed true. That many Supervisors and Rangers were more interested in an unutilized range of 100 acres than they were in getting 10,000 acres of stagnated virgin timber in a growing condition. That the more popular and romantic recreation road took precedence over the timber development road. In truth, that many were satisfied to act merely as custodians of these timber resources rather than as managers.

Has the timber growing and marketing business been pushed off the table to this extent by the pressure of other work? A few questions in the field along this line gives one food for thought. The two-year-old Forest Assistant or ten-year Supervisor may tell you, if you ask him, that he prefers to develop along administrative lines, as though this were something foreign to the growing and marketing of timber. A few days ago a Ranger told me he was far from satisfied with his timber business. It needed time and attention to develop it but where could he get the time? He believed in doing it and wanted to -- cut???

If this sentiment is at all general and the various innuendoes and implications are true, the question may well be asked - does the growing and marketing of timber receive the consideration it is entitled to when plans are made? Are the Forest Management objectives set up in the Forest plans of work satisfactory and carried out? These objectives must be set up when the timber business forces itself upon us, but how about the Forest with large amounts of undeveloped timber?

Possibly Forest Management must be divorced from what we seem to consider as administrative lines, or it may be that Forest Management should take more of a hand in what are generally conceived as administrative things.

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IT PAYS TO PROSECUTE

By Crosby A. Hoar - Duluth

The Fire Prevention Committee of the Chamber of Commerce of Duluth, Minn., extended its activities recently to include forest fires as well as those more commonly associated with cities. In order to call the attention of people in northeastern Minnesota to the necessity for preventing forest fires, the committee announced a slogan contest open to all comers, with prizes donated by local merchants. Publicity was given the contest through local papers. Nearly 1,400 slogans were submitted, good, bad, and indifferent. About three-fourths of them were aimed at the camper, showing how closely he is associated with fire in the popular mind. As this is written the prizes have not been awarded and the value of the slogans received is questionable, but there was one which pleased the local State Ranger, who had just won a hard-fought law enforcement case. It reads:

> "Careful campers and shady trails;
> Neglected camp fires mean county jails."

Who says the people don't want the fire laws enforced?

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WASHINGTON NOTES

An Interview with the Naval Stores Commission: Several weeks ago a group of southern turpentine operators went to France to study conservative methods of turpentining in the Landes. The expedition grew out of a meeting in the South last winter attended by Col. Greeley and Dr. Austin Cary. A French newspaper, "La Journée Industrielle," has recently printed an interview with one of the members of this mission, and quotes the American delegate as follows:

"We have come to France to study on the spot your rational system of cultivation of pine trees and their exploitation.

"Unfortunately, production in the United States is on the wane. We foresee that in ten years the exploitation will be stopped and our reserve which in the Southern States amounts to 226,000,000 gallons of turpentine and 6,900,000,000 pounds of pitches will be exhausted.

"The fault is due to our wasteful and destructive methods of exploitation. The sawmill follows on the heels of the rosin gatherer and the motto of the forestry exploiting companies seems to be 'maximum returns in a minimum of time.'

"Thus, in our country, the forests are destroyed by the exploiters within four or five years. The loss in sending the wood to the sawmills is from 20 to 50 per cent. Our needs for pine wood are considerable. The forests of the West have been attacked after a considerable diminishment of those in the South. Now the western forests also are threatened with destruction.

"It is necessary, therefore, that we take steps immediately to meet this situation. ....

"When we came to this region during the war to exploit the forests of the Landes we were able then to take account of the superiority of your processes. We naval stores men in America are of opinion that we should adopt the French methods. In that way only can we, notwithstanding the large decrease in our production, obtain without too much loss the reforestation of our pine woods."

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FOREST PRODUCTS LABORATORY

Ghosts of a Vanished Past: Shavings from the top of a saloon bar, which is being "reconstructed" (for what purpose was not stated), were recently received for identification. Wood Technology admits only superficial acquaintance with antiques of this kind, hence the shavings were all that was necessary for identification.

The wood has a ghostly white appearance, reminding one allegorically of the pallor of a dead man's bones at the bottom of the sea over which heavily laden schooners once had been tossed back and forth.

The shavings were not so thin but what the grain could be recognized. It was distinctly that of old barley and rye. The microscope revealed the vessels that once caught the sparkling liquid the unsteady hand was wont to spill.

No, dear reader, it was not maple, nor oak, nor mahogany, nor precious wood from the Indies. It was just plain cottonwood, humble as the hob-nailed shoes, mackinaw, and old pipe of the lumberjack who in days gone by stood at this bar in Menominee, Michigan, and stood, and stood, and stood (until he couldn't stand any longer).

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FOREST EXPERIMENT STATIONS

Investigative Travel Precarious in Tennessee: That soap, monkeys, itinerant females in distress, hay wire, and hound dogs enter into the vicissitudes of forest research in Tennessee is the opinion of E. F. McCarthy and Lester H. Reineke, members of a field party of the Appalachian Forest Experiment Station recently returned to Asheville. One damaged optic and the effects of a shortage of soap are exhibited as evidence.

The field party, hunting sample plots for oak yield tables, met the afflicted lady, hunting soap, on a remote road in the Tennessee hills. Down the road a spell was the lady's car, ditched, with its life blood leaking slowly away into a vanity case. First aid with soap, bandage, and bailing wire was administered by McCarthy and Reineke, and all might have gone well except for the all pervasive spirit of research, prompting further investigation. Enter the belligerent monk and the choleric hound pup.

The monk, who was guarding the left door of the car, shook hands cordially with Reineke, but the pup evinced dissent. A short colloquy between the monk and the pup evidently led to a course of action designed to repel boarders, for as Reineke was completing the inspection he was suddenly confronted by the monk, squared off and looking for an opening. Reineke blocked a savage jab to the ribs and swung for the jaw, but the monk neatly side-stepped, feinted with his right, and landed his left in Reineke's eye with a well directed punch from the shoulder that ended the battle. Tranquillity was restored with difficulty.

Hereafter the jitney field outfit of the Appalachian Station will include a pair of brass knucks and a monkey wrench.

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DISTRICT 1 - NORTHERN DISTRICT

Fires: During the period beginning May 10 and ending July 20 there has been in District 1 a total of 735 fires, which have burned over about 46,000 acres, of which 22,800 acres are National Forest area, and have cost the Forest Service more than $150,000 to suppress. Of these 415 were man-caused and 320 resulted from lightning. The precipitation has been much short of normal for the season.

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Bud Worm Infestation: A new spruce bud worm infestation was recently noted along the Lolo Trail between the Clearwater and the Selway National Forests. This trail is along the route formerly taken by Lewis and Clark in their expedition during 1805 and 1806. The attack of the bud worms in this case is not as intensive as on some other areas previously noted, but is quite widespread, extending for a distance of about two miles along the trail.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

National Forest Names: In cleaning out the Operation files recently, a compilation of National Forest names and explanations was found covering the entire Forest Service in 1909. There has been inquiry about this sort of information from time to time, and in case similar copies are not on file in other offices, additional copies will gladly be made and furnished.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Southwestern City Wakes Up: For many years the Forest officers in charge of the Gila National Forest have observed the diminishing water supply of Silver City. Whenever opportunity offered, and that was frequently, the Supervisor suggested and even urged a cooperative agreement for the protection of the watershed but the citizens failed to see the need or were indifferent. It took the pinch of poverty to arouse the town but that finally came in an acute degree. Only part of the watershed is within the Gila National Forest and that is badly damaged by overgrazing and the outside areas are virtually ruined. As a result the famous old mining center is alternately fighting floods that threaten to tear a gorge through the middle of town and quarreling with her citizens over water enough for the family bath. Lawns, flowers, and shade trees have been almost abandoned. Now, however, at a recent meeting of the city council, a formal vigorous request has been voted for the Forest Service to protect the watershed. Every assistance possible will be extended by the Gila, of course, in the effort to restore. But restoration will be some job.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Save the Sawtooth - Try Toothsome Beechnut: The reaction to the "No Smoking" rule has been better than we expected. To be sure, some of the Super's sweeties have protested vigorously against his change from smoking to chewing, but outside of that the public is performing mighty well.

The other day we secured a worthy exponent of the none too gentle art of plug assimilation, and the lead he gave us has simply immense possibilities. Our fire-flagger (by the way, what shall we name these birds who red-flag the tourists and give them hot gravy about fires?) stopped a snappy salesman who ardently agreed about the danger of smoking and held forth at length upon the merits of chewing. What is more, he turned over sevaral hundred sample plugs with the request that tourists be supplied gratis.

Do you know, the smoke-deprived public simply went wild about those samples and the supply was exhausted the second day. What a golden opportunity for P. Lorrillard and other distillers of the lowly chew! The forests being burned up! Smokers causing devastation!! Snipes robbing future generations!!! Citizens be patriotic!!!! Chewing will save the forests!!!!! Chew, men, chew!!!!!! Chew for your country!!!!!!!

The public should respond nobly to such an appeal; plug production will jump by leaps and bounds; and our smoker problem will be solved. We will need some new slogans:

"Masterpiece Muffles Matches"
"Prevent Forest Fires – Pack a Plug"
"Careful Campers Carry Climax"
"Chew Horseshoe – It Sprays"

But say, friend, how a plug gags you at first !--M.S.B.

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DISTRICT 5 - CALIFORNIA DISTRICT

Fire Destroys Timber Survey Camp: On the evening of July 8 a fire destroyed a portion of the timber survey camp on the Lava Bed Project of the Modoc Forest. A defective stove pipe – a stiff breeze – and flames !

The cook had left the camp to go a short distance to the storage room for supplies when the stove pipe was blown over, setting fire to the cook tent. He rushed back and did everything one man possibly could to suppress the blaze.

The personal belongings of a few of the boys were destroyed. There was no heavy loss of equipment. The greatest loss, however, was the destruction of the records of the field work. Records of this sort are valuable and are not safe in any of our camps unless stored in fireproof containers. Until such a container can be found it might be well for such papers to be sent either to the Supervisor's office or to the District office for safe keeping.--T.D.W.

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GOOD TIMBER

The tree that never had to fight
For sun and sky and air and light,
That stood out in the open plain
And always got its share of rain,
Never became a forest king,
But lived and died a scrubby thing.

The man who never had to toil
To heaven from the common soil,
Who never had to earn his share
Of sun and sky and light and air,
Never became a manly man,
But lived and died as he began.

Good timber does not grow in ease;
The stronger wind the tougher trees,
The farther sky the greater length,
The more the storm the more the strength.
By sun and cold, by rain and snows,
In tree or man good timber grows.

Where thickest stands the forest growth,
We find the patriarchs of both;
And they hold converse with the stars
Whose broken branches show the scars
Of many winds and much of strife;
This is the Common Law of Life.
--Clipped.

DISTRICT 6 -- NORTH PACIFIC DISTRICT

Recent Class D and E Sales: On June 3 one bid was received for the Humbug Creek unit on the Santiam National Forest which embraces 77,500,000 feet of typical old-growth timber, 73 per cent Douglas fir, The rates are $2 for the Douglas fir and cedar, $3 for the western white pine and sugar pine, and $.50 for the hemlock, silver fir, etc. The purchasers are the Hammond Lumber Company who are now operating other National Forest timber near-by.

The Bowman-Hicks Lumber Company of La Grande were the only bidders on the Powwatka Ridge-Wildcat Creek units on the Wallowa National Forest, which aggregate 38,510,000 feet, about 64 per cent yellow pine and the rest Douglas fir, larch, etc. The prices are as advertised - $3.25 per M. feet B. M. for the yellow pine and lodgepole pine, and $.50 for the others. The Bowman-Hicks Company which is the successor of the George Palmer Lumber Company owns extensive holdings intermingled with this tract.--T.T.M.

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Speaking of Road Widths! I wonder if a word from one who helps build them and uses them would be amiss? I say mileage against handsomeness. The primary objective of our road funds is forest protection. One handsome 30-mile road, costing $300,000 isn't going to help protect as much timber as 300 miles of 9 ft. road costing something like the same figure. After all, those of us who have put in a life time on mighty poor 5 and 6-foot roads enjoy traveling a well-built 9 footer.--F.W.W.

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DISTRICT 7 - EASTERN DISTRICT

Veteran Ranger Murdered: Three shots and three knife wounds caused the death of W. D. Jones, veteran forest Ranger on the Arkansas National Forest, whose body was found on the morning of August 29 in the yard of Robert Weldon's farm home in Yell County. Only meager details of the killing and of the coroner's inquest are now available, but it appears that some official errand brought Jones to Weldon's home and resulted in trouble with Weldon, who disappeared on the morning after the killing and who is now being hunted throughout eight neighboring counties by sheriffs and organized citizen posses.

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Service Bulletin

U.S. FOREST SERVICE

(Contents Confidential)

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WORK PROGRAM UNDER McNARY-CLARKE ACT SHOULD INCLUDE ALASKA

By B. F. Heintzleman, D-8

The McNary-Clarke Act which forms the basis of an enlarged Federal forest policy indicates a public desire to have all forest lands in the United States kept in a productive condition; it authorizes and directs the National Government to interest itself in the protection and management of such lands regardless of ownership. Government-owned lands are included in its provisions and it seems only logical that forests of the public domain should be about the first to receive attention under the terms of the Act. Neglecting forest lands for which the Government alone is responsible while advocating and assisting in the protection and management of patented lands would be inconsistent. Also, such a course would mean an incomplete program of work under the forest policy act in that very extensive areas would be left without proper supervision.

The interior of Alaska has a forest fire protection problem clearly worthy of consideration in connection with the new Federal forest policy. All of the lands involved are Government-owned, the area is very large, and the fire risk is high. It is a problem that needs extended study before any actual protective work is attempted as no one has more than a superficial knowledge of the extent and value of the forest resources and the cost of a protective system. The whole matter is entirely up to the Federal Government. The forested States can be expected to take the lead in protection on State-owned and private lands, asking only Federal cooperation, owing to their direct interest in such protection. But interior Alaska has practically no private or Territorial land, the whole region, forested and unforested, being open public domain of the United States.

Estimates, which amount to little more than mere guesses, have placed the forested area of Alaska outside the National Forests as high as 75,000,000 acres. The great bulk of this land lies in interior Alaska on the drainage areas of the Yukon, Kuskokwim, and Copper rivers. The principal trees are white spruce, white birch, black spruce and various species of cottonwood, the first two being by far the most important and growing in mixture on the better soils. At least 5,000,000 acres carries forests that can be classed as sawtimber, with an average yield of 5,000 board feet per acre. The remainder of the forested area carries trees of pole size, 4" to 10" diameter, with the exception that the white spruce is somewhat larger, 12" to 16" in diameter. This small timber will never contribute to the general lumber markets but it has a high value for local use and can assist very materially in the development of the agricultural, mining, and other industries which eventually will be important in the sections where these forests are located. Also, when one considers the low yields per acre in cordwood of many spruce forests now held by large pulp and paper companies in eastern Canada it takes little imagination to believe that the white spruce, black spruce, and poplar of interior Alaska will some time be utilized for paper manufacture.

These forests do not form a continuous cover to the altitudinal limits of tree growth in the region but are interrupted by very extensive muskegs or peat swamps carrying an open stunted tree growth clearly of no present or future commercial value. These extensive muskegs make any estimates of the total forest area very uncertain without a field examination.

Interior Alaska has a light rainfall, around 15 inches for the year, the summers are dry and hot and fires burn intensely. There is little or no public sentiment for fire protection among the settlers, prospectors, and natives, and no protective force whatever. Fires run unhampered until put out by natural physical barriers, or the fall rains. Millions of acres are burned over every year.

The first work toward bringing these interior forests within the scope of the new Federal forest policy is an extended reconnaissance to determine the location and extent of the areas having timber resources entitled to protection on the basis of quantity and quality and the probable cost of an adequate protective system. The estimated cost of this reconnaissance is $25,000. In the opinion of foresters who have visited parts of this region the expenditure is well worth while. Most certainly in the carrying out of a Federal forest policy 75,000,000 acres of Government-owned timberland should not be passed by. A careful study of its present value and future possibilities may show that its protection is decidealy in the public interest.

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STOCK ACTUALLY GRAZED DURING 1923

By Will C. Barnes, Washington

The following table showing number of stock actually grazed on our National Forests by States and the percentage we graze of the whole, omitting the States where National Forest interests are small, will be of interest to Forest Officers.

The peak load we carried in 1918 was, of course, far above safety. Reductions in numbers from them cannot fairly be called losses as a whole. Since and including 1921, when the livestock business was becoming somewhat normal, we have lost only 210,000 cattle and 560,000 sheep; not a serious falling off considering the condition the livestock business of the West has been in for the last few years. Here and there we have some unoccupied ranges, but the percentage is very low and the Supervisors are quite content to let them go unused and give them (the Forests, not the Supervisors), a much needed rest. We have lost 3,246 cattle and 630 sheep permittees since 1921. Only two States showed a gain in numbers of permittees, Wyoming losing 76,000 sheep but gaining 47 sheep permittees. New Mexico lost 36,000 cattle, but gained 53 cattle permittees.

Calendar year 1923

State	Cattle and horses No.permits	Cattle and horses No.stock	% of total in State	Sheep and goats No.permits	Sheep and goats No.stock
Alabama	8	172	.. .	..	..
Alaska	1	(100 reindeer)	.. .	..	..
Arizona	1,290	302,471	28.0	109	287,605
Arkansas	79	1,933	.. .	3	53
California	2,497	200,859	14.0	396	473,812
Colorado	3,891	338,869	26.	653	846,915
Florida	34	861	.. .	3	723
Idaho	3,538	164,082	37.	829	1,443,334
Montana	2,514	159,923	13	384	606,297
Nebraska	41	12,692	.. .	..	..
Nevada	445	69,648	20.	101	291,067
New Hampshire	25	211	.. .	..	..
New Mexico	1,967	133,521	17.	430	293,888
North Carolina	321	1,339	.. .	27	242
Oklahoma	83	3,552	.. .	..	..
Oregon	1,768	135,423	23.	443	642,625
South Dakota	712	30,479	.. .	3	5,000
Tennessee	47	612	.. .	7	99
Utah	6,466	157,007	36.	1,779	750,971
Virginia	178	1,864	.. .	3	86
Washington	721	26,650	9.0	131	169,420
West Virginia	17	127	.. .	4	114
Wyoming	1,038	127,188	16.	279	605,487
	27,781	1,869,483		5,584	6,417,738
Comparative totals:					
1918	32,600	2,240,010		6,513	8,512,208
1921	31,027	2,080,248		6,214	6,979,951
1922	30,148	1,952,496		5,811	6,534,065
1923	27,781	1,869,483		5,584	6,417,738

WASHINGTON NOTES

Loblolly Pine on the Eastern Shore: By Will C. Barnes, Washington.

The Allegheny Section of the Society of American Foresters surely did themselves proud the way they entertained the Washington Section in the trip to the Eastern Shore of Maryland the latter part of July. We all met at the steamer at Annapolis early Saturday morning, July 25, at eight sharp. Several came over the evening before to avoid being crowded out, for the Claiborne ferry carries only thirty autos and frequently there's a long waiting list. We all felt quite set up when the big car with "Commonwealth of Pennsylvania" on its doors rolled onto the boat, with five of Bob Stuart's men in it. Some class!

The glorious breezy hour and a half ride across Chesapeake Bay gave everyone a good chance to say "Howdy" to friends and make new acquaintances. Thirteen autos made the run from Claiborne to Hurlock, fifty miles over fine cement roads, where we had lunch. Here two cars from New Jersey joined the caravan making fifteen in all. Then on through a lovely region level as a western prairie, with wonderful soft mellow soil covered with well kept farms, comfortable homes, frequent charming bits of water where the bay drove a long crooked finger up into the land, plenty of farm woodlots, prosperous looking towns, and endless small truck farms kept as clean and weedless as a city flower bed. Almost every town along the road had a history that ran far back into Colonial times. At Salisbury and Sharptown we were shown the process of making baskets, boxes, hampers, crates, and barrels for fruit and vegetable shipments. The raw material for this all comes from the farm woods in the immediate vicinity, thus making the region very self-sustaining.

State Forester Besley, with Cope and Pfeiffer, his able assistants, were tireless in their efforts to make the trip not only pleasant but profitable. At various points they showed us some fine examples of what can be done with loblolly pine on the eastern shore. I think nearly everyone not in close touch with loblolly rather held that tree in slight esteem. And, honest, what could you expect from a tree cursed with such a moniker? However, before we got out of the last plantation of this fine timber-producing tree, which was about half past seven Saturday evening, there wasn't a man in the whole bunch but what was ready to take off his hat and vote that Besley and his men had certainly shown fine judgment when they took hold of this tree as best suited for the eastern shore soil, climate, and economic needs.

Somebody lacking in respect for the dignity of the occasion called that last ride from Berlin "the endurance ride." To be sure, there was some dust, but what's dust between Maryland foresters? This member of the party admits he came home with his head full of new ideas after seeing tracts of loblolly which in from sixty to seventy years had produced over 22,000 feet of fine straight timber to the acre, with thinnings and cuttings during the period that nearly paid the carrying charges. Several farmers with whom we talked said their long-neglected loblolly woodlots had saved them from the poorhouse during the last few years. Certainly there was a very general acknowledgment of the value of woodlots to the average general farmer of the eastern shore country. Several said that on a dollar an cents basis their woodlots were paying them a higher rate of interest than their cultivated lands.

A delightful evening was spent at Princess Anne, and the next morning we admired the giant Pecan in the yard of Beckford Manor, the home of Mr. Lankford who, with his charming wife, made us all more than welcome. This grand old tree planted from a single nut in 1800 is 110 feet high, has a spread of over 132 feet with a B. H. circumference of 14.2 feet. Last season it produced 45 bushels of excellent pecans. Some tree, we all agreed. Right close to it, however, was a glorious old Black Walnut of about the same age which measured almost as much as its neighbor. Both trees were as sound as a six-year old sapling. The large area about the old place was full of some of the finest specimens of various kinds of tree life any of us had ever seen.

Snow Hill for lunch and our photo, massed under a big elm in the city park. Pocomoke with its miniature Dismal Swamp, virgin Cypress trees, Overcup Oak, and Swamp Cottonwood, marked our "further south," from there swinging round to the northwest in a big loop.

At Berlin, where we spent the third night, Mr. Harrison of the Harrison Nursery Company and two of his stalwart sons showed us over their great plant, which includes not only one of the largest stocks of young trees and plants, but also one of the largest and finest peach orchards in the United States. Mr. Harrison believes in clean culture under all his trees, and although they covered hundreds of acres not a weed or a stray spear of grass could be found. Just outside of Berlin we were introduced to what is said to be the largest English elm in captivity this side the Atlantic, a grand old tree 23.6 feet round, 80 high, its long sweeping arms covering a spread of 116 feet.

Saturday evening most of the crowd motored from Berlin to Ocean City, eight miles, for a dip in the ocean, and repeated it Sunday morning. This was swimming, not "bathing." Then a part of the crowd tore off for the three p. m. Claiborne ferry and home, while the rest of us journeyed northward through Delaware over the famous DuPont Highway and so round by Wilmington and home by Monday evening.

It surely was a worth while trip for each and every one of the fifty-one men and one woman in the party. The latter declared she had the time of her life, especially when the huckleberry thickets were under close observation. What worries the writer is as to how and when can we of the Washington bunch ever hope to meet our obligations to the officers and members of the Allegheny section for the good times we have enjoyed on the last two trips they have taken us.

The following States were represented in the party: Maryland, New Jersey, Pennsylvania, Virginia, and the District of Columbia.

FOREST PRODUCTS LABORATORY

Koehler's New Book Out: "The Properties and Uses of Wood" by Arthur Koehler is one of the latest books received at our library. This volume is one of a series of industrial and engineering education textbooks prepared under the direction of the extension division of the University of Wisconsin. The lumberman, manufacturer, dealer, and consumer will find the book useful for learning how to get more efficient utilization and the general reader will also find much of interest as technical terms are avoided and the book is written in simple language.

Abundant references direct the reader to more detailed or technical discussions. The book is published by the McGraw-Hill Company and sells for $3.50.

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Laboratory Installs Keel Blocks in Lake Mendota: The installation of five sets of keel blocks in Lake Mendota near the Laboratory does not indicate that this branch of the Government is to go into the shipbuilding industry. The blocks came from the Philadelphia navy yard and are to be tested for the load they will sustain after they have been submerged for a time.

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FOREST EXPERIMENT STATIONS

Zon and Sparhawk Honored by Finns: Raphael Zon, Director of the Lake States Forest Experiment Station, and W. N. Sparhawk of Research have just been appointed corresponding secretaries of the Finnish Forestry Society, the object of which is to promote scientific forest investigations in Finland.

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DISTRICT 1 - NORTHERN DISTRICT

Ha-ha-ha-ha! Here's One on California! At the end of one of the branch lines of the Union Pacific on the Madison National Forest, the Forest Service has a timber sale which includes beautiful lodgepole pine trees. So beautiful are these trees that a group of people from San Diego, California, are making arrangements to ship a number of house logs sufficient to build up to one hundred cabins at their country club and summer home sites at San Diego.

Put that in your pipe, California, and smoke it!

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

How Far Will Sparks Blow? The August 18 edition of District 3's Service Bulletin asked for figures as to how far sparks will blow. In 1910, the Rockerville fire on the Harney blew sparks across Spring Creek Canon, a distance of three-fourths of a mile. A heavy wind was blowing from the south and fearing the fire would jumps the canon, Ranger Shoemaker placed two men on the opposite side. A "spot fire" was started within 100 feet of the point where they were stationed and spread so rapidly that assistance had to be secured from the main fire before the "spot fire" was controlled.

On the Mayo fire in 1910 a crown fire jumped a valley 30 chains wide and spread beyond control on the other side.--J.F.C.

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Mountain Parks Fire Protective Association: Just west of Denver, there are about 8 or 10 townships of yellow pine and lodgepole forest which, to date, has received no organized protection whatever. This area comprises the Denver Mountain Parks, the summer home areas of several large associations of Denver residents and some unreserved public lands. The occurrence of a number of small fires in this region, and the extreme danger which exists at this time have alarmed these various interests to the point where they are taking preliminary steps toward the formation of a definite fire protective organization.

Tool caches have been established by the city at strategic points, and mounted patrols have been put on duty on the city land as well as on the large privately-owned tracts and very close connection is maintained with the Devils Head Lookout, who is able to pick up some fires in this region. A plan which is now under contemplation provides for the building of a lookout tower on Squaw Mountain by the city with the understanding that it will be maintained with a Forest Service lookout, provided that other interests in the region will come in on a closely knit organization which will justify these measures. The continuance of dry weather will undoubtedly see this organization completed.

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DISTRICT 3 -SOUTHWESTERN DISTRICT

Manzanita Brush and Fire: Several of the forests in Arizona have large areas densely covered by manzanita brush. Down on the Crook in the southern part of the State this year manzanita brush has been the source of genuine fire trouble. A blaze once started in it raged through with an intensity that Forest Officers and fire fighters could not stand against. The condition of the wood seemed to make little or no difference. Green manzanita burned just like dry stuff day or night. On the Prescott, farther north, during the heat of the day, especially in strong wind, fire fighters met with the same experience, but after nightfall when the atmosphere cooled down and the wind subsided, Forest Officers could deliberately maneuver fires into manzanita thickets and control them there without difficulty.

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New Mexico Wool Crop: Fleeces from New Mexico sheep this year ran in weight from four pounds in the northwestern counties to ten pounds in the southeastern part of the State. The average for the State is six pounds. The State yielded about 12 million pounds. There are 281 thousand sheep under permit on the National Forests within the State which would make forest forage a direct factor in the production of about 1,700,000 pounds of wool.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Kaibab Deer Investigation: District Forester R. H. Rutledge and S. B. Locke have returned from the southern part of the District, the principal object of the trip having been to attend the meeting of the special game committee at V. T. Park on the Kaibab, which was held August 25. In addition to the committee and the Forest Service officers who were present, there were present Mr. Mather of the Park Service, together with five or six other Park officials, and a number of stockmen from Kanab and Fredonia. The discussion of the deer situation was very full and free. The committee held a special session among themselves the evening of the twenty-fifth, and formulated some general conclusions. These conclusions will be worked into a final report at the earliest possible date by the committee. It is not known exactly what the report will contain, but it can be said from a Forest Service standpoint that the investigation was thorough and fair, that all interests were given full consideration, and that we need have no doubt as to the conclusiveness of the report, and but that it will contain very clear suggestions for future management of the deer herd.

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Follow Directions Carefully or We Cannot Refund Your Money: If you are of a composed temperament permit no external or palpable influence or persuasion to ruffle or discompose your intrinsic taciturnity. Dismiss all endeavors of the education of extrinsic superficialities, maintain a characteristic manifestation of amicability, and eschew all extraneous pretense of nonexistent superiority. Avoid arrogant superciliousness, chimerical hallucination, delusive insidiousness, impulsive truculence, and virulent causticity.--I. M. Tellinyu.

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DISTRICT 5 -- CALIFORNIA DISTRICT

Diversified Recreational Uses: Charlton may talk about diversified recreational uses, but the Angeles has nothing on the Saugus District of the Santa Barbara in that line. Recently, Ranger Peterson received an application for a Boy Scout camp to accommodate 2,000 boys, an application from the Playground Department of the city of Los Angeles for a municipal recreation camp for the colored people of that city and an application for a rest camp for furloughed and retired missionaries. He is now expecting daily to receive an application for a camp for tired Forest Officers. Incidentally, Peterson is trying to figure out what designation is most appropriate for the last application received. Who says the work of a Forest Ranger is monotonous?--L.A.B.

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Blowing Sparks: In the SERVICE BULLETIN of August 18, District 3 asks "How far will sparks blow?" During the recent fire on the Cleveland a spark carried across a level valley at least 40 chains wide and set fire to heavy brush. Several spot fires were set by sparks at 20 chains from the main fire. These distances were not actually chained but the estimates are very conservative.--S.A.N-B.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

District 6 Leads the Districts in Timber Cut: A comparison of timber sale statistics for the past year shows that District 6 leads all the other Districts in the amount of the cut under commercial sales and is second to District 5 in the amount of its timber sale receipts. The exact figures are of interest.

District	Net Receipts F.Y. 1923 Timber Sales and Settlements	Cut in Commercial timber sales in 1923 M ft. B.M.	Avg. Price received per M. Ft. in Commercial Sales
1	$393,485.10	120,235	$3.26
2	242,359.79	96,998	2.63
3	175,938.65	65,339	2.22
4	83,746.85	41,813	2.05
5	908,274.89	266,624	3.28
6	703,464.84	359,176	2.14
7	149,977.51	42,199	3.25
8	52,801.46	44,845	1.69
Total	$2,710,049.09	1,037,229	$2.64

District 6 takes a low place in the average price of stumpage cut under commercial sales, but when it is remembered that much of the cut is of low priced Douglas fir stumpage, the average is not so bad when compared with the Districts whose cut is principally of the high valued pines.

How does this District rank in the silvicultural condition of its cut-overs? That is a better test of real forestry than the amount of the cut or the prices received for stumpage.--T.T.M.

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DISTRICT 7 - EASTERN DISTRICT

Asheville Paper Advertises the Pisgah: One community at least in the United States has got the idea of sustained yield of timber as an advantage to the community; Without any undue prompting from foresters, so far as we know, the Asheville Times, Asheville, N. C., in a series of double-page advertisements of the advantages of that community says this of the Pisgah National Forest:

> The rapidity with which timber is being used need not affect the prospective manufacturer from coming to Asheville and joining manufacturers already there. Pisgah Forest is thickly wooded, and timber growing in that section is cut under a systematic plan which will make it a producer of hardwoods for those manufacturers now here and for many more. The fact is, the timber will be "farmed" in Pisgah Forest in such a way that the supply will never diminish and it can be manufactured into finished hardwood products here, just as it can in any other place. Asheville and Buncombe County lie nearer the source of supply than do the largest hardwood manufacturing centers in the State, which, of course, reduces the original cost of shipping."

They bring out clearly in the last sentence another big enonomic factor in forestry which has not generally been grasped by the public - the cost of transportation, and conversely the need of growing timber locally.

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Shortleaf Pine Brings High Price: Shortleaf pine stumpage in the Arkansas National Forest has reached a new high price level. A block of 7,839 M feet was advertised recently at $6.30 per M. Four bids were received, the lowest of which was $6.86 and the highest $8.55. Three bids were over $8. This isn't bad at all when it is considered that the timber will cut less than 2,000 feet to the acre and the lumber must be hauled 16 miles over a dirt road to the nearest shipping point. The Arkansas should reach the $100,000 class in annual receipts in another year.--J.E.S.

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Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

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THREE MILLION FOR A BILLION, OR A BUSINESS WITH AN INCOME AT ITS HEELS

By Harry Irion, Washington

Each year the hum of industry is penetrating a little deeper into the timbered slopes of the National Forests and the year ending June 30, 1924, established a new advanced front that deserves to be chronicled in the SERVICE BULLETIN. It is the first fiscal year with a timber cut of more than a billion feet and with net receipts from timber in excess of $3,000,000. With fitting solemnity, let's dub it the "three million for a billion year." Many of the details, a few of which are briefly paragraphed and tabled below, are about as satisfying and significant as the main result. For instance:

There were 17 Forests with timber receipts of more than $50,000 each, while 9 of these rolled up totals of more than $100,000. The Stanislaus, Lassen and Crater broke into the $200,000 class, the Stanislaus, mark you, with the amazing total of $281,489.

The cut on each of 14 Forests exceeded 24 million feet, the Stanislaus leading with a total of 87 million. The cut on the Arkansas was only 9 million but the timber had a contract value of more than $50,000.

Last year when compared with 1915 shows a gain of 29.8 per cent in the average stumpage price, a gain of over 102 per cent in the amount cut, and a gain of 158 per cent in timber receipts. What will the score be 10 years hence? If the rate of increase made during the decade just ended is maintained during the next 10 years, the fiscal year 1934 will yield a cut of over 2.3 billion feet with timber receipts hovering around $8,000,000, or an average of about $3.50 per thousand feet.

Using the figures for the last nine years, we find that 28.8 per cent of the National Forest cut is made in July, August and September; 26.8 per cent in October, November and December; 17.6 per cent in January, February and March; and 26.8 per cent in April, May and June. Timber sales cannot therefore be regarded as a seasonal business. Very few outdoor enterprises make a better showing.

The following tabular matter discloses a number of other interesting things about National Forest sales:

Table 1.

Amount and contract value of timber cut under commercial and cost sales, and receipts from timber sales and timber settlement during fiscal year ending June 30, 1924.

District	Amount cut M feet B. M.	Contract value	Receipts from timber sales and settlement
1	153,077	$469,557	$428,033.14
2	111,408	301,640	320,996.71
3	65,590	141,529	139,630.72
4	56,560	115,677	121,934.05
5	327,262	1,034,816	921,494.67
6	335,450	775,922	767,182.91
7	45,558	171,442	203,781.00
8	48,733	84,018	107,087.97
Total	1,143,638	$3,094,601	$3,010,141.37
Increase over 1923	148,534	524,260	310,729.81

Table 2.

Average stumpage price received in commercial and cost sales by fiscal years.

1915	$2.08	1920	$2.20
1916	2.11	1921	2.37
1917	2.07	1922	2.44
1918	2.09	1923	2.58
1919	2.15	1924	2.70

Table 3.

Forests with timber receipts in excess of $50,000 during fiscal year 1924

District	Forest	Receipts from timber sales & timber settlement F.Y. 1924	Timber cut under sales, Fiscal Year 1924 M bd.ft.	Contract value of cut, Fiscal year 1924
5	Stanislaus	$281,489	87,219	$310,391.52
5	Lassen	230,623	64,255	197,842.85
6	Crater	202,853	50,834	197,935.61
5	Shasta	171,270[1]	76,657	271,506.58
6	Whitman	128,626	44,850	133,036.07
1	Kaniksu	121,620	26,845	111,519.87
5	Plumas	115,451	44,510	114,809.72
1	Coeur d'Alene	105,580	24,818	110,772.11
8	Tongass	101,201	44,931	78,241.65
2	Medicine Bow	90,321	24,957	73,970.44
1	Kootenai	62,971	33,591	81,980.51
7	Arkansas	58,612	9,002	50,012.02
6	Olympic	57,565	44,319	65,688.15
6	Snoqualmie	56,776	29,685	56,792.63
3	Coconino	53,123	25,138	58,598.13
2	Harney	52,286	14,648	53,554.64
6	Cascade	50,288[2]	10,630	18,245.63

[1] Difference in receipts and value of timber cut mainly due to the exchange of stumpage for land.

[2] The variance between receipts and value of cut mainly due to large initial deposit in new sale.

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ARE WE "DRIFTING" IN RANGE MANAGEMENT PLANS?

By C. L. Forsling, Great Basin Grazing Exp. Sta.

The article "Grazing Management Plans - Whither Are We Drifting?" in the August 11 issue of the SERVICE BULLETIN attempts to lead us to believe the range management plans have become more or less derelicts because of their being water logged with a lot of volume, detail and complicated matter and that it is time to let Forest Management show Grazing out of the doldrums. Some one is evidently behind the times.

What Roberts says about the unwieldiness of range management plans is more true of some of the older ones built a number of years ago when this phase of forest administration was in the making, but that the situation is so serious as intimated can hardly be said of the more recent plans made in conformity with the new "Instructions for Grazing Reconnaissance on National Forests" sent out some time ago. I wish to make no contention that the present plans are perfect in all respects, but that good progress is being made. If the "light" discovered by Forest Management will be helpful to grazing in making further progress, haste should be made in following their lead. The question arises, however, as to the similarity of the difficulty in the two instances.

My understanding of the trouble with the old Forest Management Plans was that we were - to quote Preston and Eldredge - "laboring under the handicap of trying to apply to our primitive conditions the lessons taught by modern European foresters." It was more a question of what to apply rather than how to apply it. In grazing there is no question as what to apply, or at least there shouldn't be. Most of our ranges are used as intensively as our present knowledge of range management will permit. Consequently it is up to the Service to apply the best knowledge available and not back up and start off on another track as it was found best to do by Forest Management.

And again, range management differs from forest management in that all of the detail for a whole Forest must be worked out immediately if the best use of the range is to be obtained. A policy statement can be worked up with regard to the general principles to follow in cutting the timber on a Forest, and the details for marking, brush piling, etc., need be worked up only from time to time as timber sales demand. The forage crop is harvested every year and the details for its harvesting have to be available at once.

What Roberts is evidently arguing for is something that he can call the "objective" of the plan and for the bringing out in more usable form the essence of the plan. Both of these are provided for in the new instructions. The objective, if you wish to call it that, comes right after the index for the whole plan which seems the logical place for it. (See 1 under Caption IV, page 26 of the instructions.) While not termed "objective" the brief summary statement of points pertinent to and adjustments to be accomplished on the Forest as a whole is nothing more nor less than the objective statement. Perhaps it might be wise to call it the objective but even though you call the rose a sunflower the fragrance remains the same.

By reference to the second heading, page 33 of the instructions, it will be found also that preparation of the plan calls for the showing on a wall map with tracing over-lays such information as location, boundary and name of each allotment and division and the surface and forage acreage, forage types, seasonal zones, class and number of stock, plans for deferred and rotation grazing, salting grounds, watering places, range improvements, poisonous areas, alienated land used under G-6 and stock driveways -- in other words, about all the first-hand information a Forest officer needs for alloting stock and handling them on the range. All this is shown on a map to be hung on the wall of the Supervisor's office or Ranger station where it can be referred to readily at all times. This is about as boiled down and handy for reference and use as anything could be.

With regard to leaving the details for each grazing district to be worked out by the Supervisor as it now is, the Supervisor has full responsibility for the final plan. The only reason that a reconnaissance is made and a management plan is prepared for a Forest is to assist the local force in administration, and working up the detail for grazing districts is a considerable portion of the assistance that the reconnaissance man is able to give. Of course if the Supervisor wants to handle all of this himself I am sure the reconnaissance man would be glad to be relieved of the job, but does the average Supervisor have the time to go into all of the details necessary for its accomplishment?

As to the "breath of life" that depends upon the man applying the plan. In other words that "breath of life" is Ranger Bill. No plan ever grew legs and walked. It is only a piece of machinery and it takes an engineer to run it. The load carried and the efficiency in handling depends upon the engineer. Furthermore, no plan was ever correct or complete in all its details. It must be improved and kept up to date as time goes on. Otherwise it will not serve its purpose.

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A CORRECTION

In the article entitled "Coyotes and Summer Sheep Range" by John H. Hatton, which appeared in the SERVICE BULLETIN of August 25, the last two sentences in the first paragraph should read: "In fact, sheepmen used to look forward with a sense of relief to getting away from the plains into the mountains. The coyotes have now become so bold in the mountains that daylight raidsoon young lambs are common."

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FOREST PRODUCTS LABORATORY

Using a Mountain of Sawdust: Ten carloads of sawdust - 250 tons a day - is the rate at which sawdust from a huge pile at Cheboygan is being shipped to the United States Gypsum Company, which is using it in the manufacture of wall board, according to a news item. The sawdust pile covers 13 acres, is 50 to 60 feet high, and will require more than 500 working days to move.

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Aspen Used in 16th Century Painting: A few fragments of wormeaten wood taken from a 16th century painting of a Madonna and Cherubs were identified as a species of Populus by Wood Technology. The American species that corresponds most closely to the specimen is the quaking aspen or poplar, sometimes known as popple, and it may be that the wood is the common aspen. Presumably one could say of the wood in this picture, "Save the Surface and You Save All!"

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DISTRICT 1 - NORTHERN DISTRICT

Favorable Road Contracts: This year for the first time since 1916 contractors are eagerly bidding for Forest Road construction work. This year comparatively little Federal aid or other general contracting work is being carried on in this District. For this reason the contractors are usually out of work and are eagerly bidding on Forest Road construction. Bid prices are on the average about 25% less than last year, and considerably under the engineers' estimate. The favorable labor market is one of the causes for the reduction of unit prices.

Last year it was unusual if as many as 5 or 6 bids were received for one job. This year in several cases as many as 11 bids were received. Several black horses have entered the game and in a number of cases have secured the work. It appears that under the low prices bid, contractors stand to lose money. Some trouble is anticipated in having the jobs completed as a result.

The contractors submitting these low bids apparently expect to come out financially ahead by pushing the work during the very favorable labor market.--F.E.T.

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Hunter Trader and Trapper Accepts Stories: Deputy Forest Supervisor Rush of the Lewis and Clark Forest has written a story entitled "Amateur Picture Taking in the Hills," which has been accepted for future publication by HUNTER TRADER AND TRAPPER. In accepting the story the editor has asked for another on the work of the Forest Ranger.

It is believed that the sportsmen's magazines offer the best of opportunities for stories which will interest lovers of the out-of-doors all over the country, and that through such stories the work of the Forest Service can, more or less incidentally, be brought to the attention of a portion of the reading public.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Training Fire Fighters: As the people filed out of a motion picture theater at Meeker, Colorado, where they had just been THE FOREST RANGERS' JOB, Sheriff Manaugh of Rio Blanco met them at the door and asked for volunteers to fight a forest fire on the White River National Forest east of Meeker, which had just been reported by Ranger Lew Hahn's wife.

There was a large response from the men who had just watched a good illustration in the picture of how to attack a fire and build a line. The fire had gained considerable headway before crews were able to reach it but the knowledge of those fresh from the theater aided materially in handling the situation.

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Wild Life Conference: July 14 to 16 a Wild Life and Nature conference was held at Boulden, similar to the one that was held a year ago. This meeting was sponsored by various State organizations such as the Colorado Mountain Club, Colorado Game and Fish Protective Association, Outdoor League, Garden Club, Historical Society, and the Colorado State Forestry Association.

Mr. Cochran of the office of Public Relations gave a general conservation talk. Dr. Oberholzer of the Bureau of Biological Survey also was one of the leading speakers.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Cake Chocolate Not Good Dessert for Coronado Fire Fighters: Supervisor Calkins thinks some dessert other than cake chocolate should be placed in emergency rations for fire fighters at least for his Forest. Early in the season the chocolate arrived all right but was a temptation to some to eat it while it still had form. This left the emergency rations dessertless. Later, in consignments which reached the Forest headquarters at Tucson when the thermometer was registering 100 degrees plus, the canned goods had become chocolate-coated, the cake chocolate having ceased to be cake. The emergency rations were still dessertless.

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La Sierra de Maria Magdalena: On the side of a mountain near Magdalena, New Mexico, the headquarters of the Datil National Forest, is the image of a woman's face. It is just an enormous bare rock, surrounded by scrubby evergreens, but art could scarcely improve the natural beauty. The name, "La Sierra de Maria Magdalena" (The Mountain of Mary Magdalene) was given to the mountain, it is said, by a group of Spanish soldiers who, in quest of riches and romance in the years of the conquest of New Mexico, after weeks of hardship came upon the mountain suddenly. It resembled a similar mountain with the image of a woman's bust in old Spain and the footsore soldiers were greatly rejoiced at the sight of this caprice of nature that reminded them of the land from whence they came.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Ranger's Boy Shows The Right Spirit: Master Glen Quigley just completed a twelve-day inspection trip over the North Division of the La Sal. The only trouble encountered, except the breaking of the crystal on his watch, was with the trail crew. They started to blaze the route to the left of an obstruction when Glen called a halt as he knew it should go around to the right side instead of the left, because, says he, "My dad showed me where this trail is to be built." Glen, knowing that dad was on the fires in Idaho, sensed the responsibility and saw that the trail went around the clump on the right side. He wanted to extend the trip longer but his mother insisted that he lay aside Ranger duties and start to school on the opening day so he could get through the fourth grade.

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Wild Horses - Supervisor Mink's Plan: Supervisor Mink of the Lemhi Forest is laying plans for horse roundups this fall. In order to get around some of the usual difficulties incident to horse roundups, he is taking a number of interesting precautions. On account of the difficulty of finding purchasers for the horses after they have been taken and impounded, he has made arrangements with the Lemhi Woolgrowers Association to purchase 100 head of the horses to be used as coyote bait. He has also made arrangements with a commission buyer who will ship all horses weighing over 1050 pounds to market at his own expense, guaranteeing the accrued charges on the horses, as well as the freight, charging for his service only his regular commission. Supervisor Mink has also had conferences with county officials in two of the three counties touched by the Lemhi Forest and these men have promised to cooperate with him in disposing of the horses under the Idaho law.

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DISTRICT 5 - CALIFORNIA DISTRICT

Gray Wolf: An old male gray wolf was recently taken in eastern Lassen County by a Government trapper working under the direction of Chas. G. Poole, Predatory Animal Inspector of the Biological Survey. This is the second scientific record of this species from California, the first being from San Bernardino County near the Colorado River. The present specimen was 5 feet 6 inches long and 32 inches high at shoulder. It weighed but 56 pounds, approximately half of the weight of a wolf of that size in good condition. One hind foot had been severed just below the hock. Mr. Poole states that there have been stories of a big old wolf in southern Idaho which has done a great deal of damage to stock. He thinks it is quite within the realm of possibility that this may be the individual which, harassed by Biological Survey trappers, the drying up of water holes, or a combination of the two, drifted across to California, there to meet his fate.--P.J.F.

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Big Things on the Shasta: On the Trinity District of the Shasta the following measurements of big trees have recently been made:

An Incense Cedar, circumference 26 ft. 4 in.
A Foxtail Pine, " 20 " 53 "
A Douglas Fir, " 22 " 8 "
A Western Yellow Pine, " 23 " 1 "
A Sugar Pine which measures 112 ft. to the first limb.--A.E.N.

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Free Room and Board: The afternoon of August 2 a laborer named Wm. Oetes started a rough-house in our camp on the Ralston Ridge and bathed the cook in a lotion of canned peaches and hot beans. The man was sent out and paid off and the sheriff of Eldorado County gave him lodging until the sheriff of Placer County wanted his hotel transferred, which was done. The justice of the peace of Placer County thereupon gave Oetes room rent free for 25 days for disturbing the peace.--E.P.S.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Oregon Editors Offer Aid: The Forest Service in the North Pacific District has no better friends than the editors. Witness the following wire received by Asst. District Forester Guthrie on June 5 from Mr. Hal E. Hoss, President of the Oregon State Editorial Association:

"Press of State ready to cooperate in publicity campaign to assist present forest fire crisis. This office at your service to bring matter to attention of public through State newspapers. Advise if needed."

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Prolific: According to the Official Record (lists of published articles by Forest officers) from May 7 to June 11, inclusive, out of a total of 64 articles appearing in print contributed by the Forest Service, 20 were by D-6 men.

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DISTRICT 7 - EASTERN DISTRICT

Authorities Hold Man In Connection with Ranger's Death: Robert Weldon, Yell County homesteader, wanted in connection with the mysterious murder of Forest Ranger Bud Jones of the Arkansas National Forest, which was reported in the SERVICE BULLETIN of September 8, has surrendered and is now lodged in the Yell County jail. Weldon has thus far refused to talk about the killing, to which there were no witnesses, and according to reports is entirely unworried. Albert Yates, another Yell County farmer, who is alleged to have told the authorities that Weldon confessed to him of having killed Jones, was also arrested and taken to the county jail.

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Wichita Praised By Scout Executive: Scout Executive Speis of Fort Worth, Texas, is authority for the statement in the Lawton, Oklahoma, Constitution of August 28 that the Wichita National Forest and Game Preserve offers the finest place for an outing for boys to be found in the entire Southwest. The scout executive was on the way home with 31 honor Scouts who had been given a 10-day trip to the Wichita as a reward for distinguished service in scout craft. He declares that a select number of Fort Worth honor scouts will be sent to the Wichita henceforth every year.

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Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

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TIMBER AND TOURISTS

By J. C. Kircher, D-3

Not long ago a Forest officer was conversing with a tourist. In commenting on Forest Service fire protection, the tourist remarked, "You spend a lot of money protecting timber from fire and then you let lumber companies come in and cut it down."

The tourist hit close to the truth. The Forest Service is primarily in the timber-producing business. It is certainly not the policy to let trees grow old and die and rot, but rather to make them of use to man. Trees must be cut and made into lumber in order to meet their highest economic use.

People may well ask why the forests are protected against fire and it is their right to be told. The fact that the tourist did not know made the Forest officer think seriously about how far short Service publicity is falling in the attempt to reach all classes that need enlightenment.

Mr. Tourist was satisfied when it was explained to him that the Forest Service is dedicated to the safeguarding of the nation's timber supply rather than the preservation of the individual trees, and that fire protection is chiefly the means of caring for the timber crop until it is ripe. He heartily approved the attitude of the Government when he understood that the performance of the economic function of timber production does not preclude the use of the forests for other purposes, including recreation.

Forests have been used always, more or less, for recreation and ~~their~~ their attractions appeal more and more to the vacationists as the years go by. There are, however, still many people who think that forests in general should remain untouched by the ax. The minds of these people should be set right with the knowledge that the growing and harvesting of timber is not necessarily incompatible with recreation. Conflicts will occur, of course. In such cases recreation, speaking broadly, should, where National Forests are concerned, give way to the accomplishment of the duty for which the Forest Service was created.

On the other hand, the true measure for each area is highest human use, and limited areas within the forests may well find their greatest service to mankind when set aside for recreation. This includes such uses as camp ground sites, resorts, and scenic roads. The Service is definitely committed to a policy of protection of such areas from unwise timber cutting.

The tourist is at present one of the weak spots in fire prevention programs. He is responsible for too many man-caused fires. One of the chief reasons for public relations activity is the need for fire prevention. It is given greatest emphasis by Forest officers in their contacts with people. The tourist should be taught that forests are protected from fire in order that the trees may be cut for lumber; that protection for harvesting is exactly the thing that should be done but that there is room for him and all his kind - if he is the safe kind - along with the lumber industry.

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THE LIFE OF A LOOKOUT

(Anonymous--Found in a Lookout House on the Colville Forest)

O, for the life of a Lookout,
On top of this lonely peak;
Nothing to do but lookout
Seven days in the week.

Talk of your life in the city,
Take it--but give to me
This place overlooking the country
As far as the eye can see.

The wind and the clouds are companions,
The squirrels and chipmunks, too.
With the birds and the trees and the insects,
Why, there is no cause to be blue!

You're up in the morning at daylight,
Scanning the country for smoke,
While the rest of the world is sleeping;
You smile and think it's a joke--

That the people, not knowing, are thinking
"'Tis a mighty poor job he's got"--
When you wouldn't exchange this fair living
For the softest job of the lot.

O, for the life of a Lookout,
On top of this lonely peak;
Nothing to do but lookout
Seven days in the week!

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GOOD FIRE CONTROL

By N. F. Macduff, D-6

Clearing work on the Southern Pacific Railroad right of way through the Cascade Forest is very nearly completed. Constant pressure has been required to prevent fires on this area--from clearing fires, smokers and wobblies--so far with very fair success. On days when the relative humidity was low or expected to be low no burning at all was permitted. On other days burning was done at night. All fires extinguished with water by 9 a. m. No burning was allowed except where water was instantly and constantly available. Gas fire engines, Evinrudes, Fairbanks-Morse, etc., with 1,200 feet of hose were used. District Ranger J. F. Campbell required the company to employ a firewarden in each camp, who had no other duties, and to deposit in a cooperative fund the salary and expense for a chief firewarden, who supervised the burning operations. Mr. Campbell was fortunate in being able to secure for this position Mr. Foster Steele, who, after 19 or 20 years in the Service, was taking a furlough.

The company was also required to furnish a hygrothermograph, and relative humidity is a by-word among the workmen, who greet Forest officers--"Well, how's our relative Mr. Humidity this morning?"

Tunnel contractors are now establishing camps and moving in supplies for the winter. One sawmill is to be set up soon to saw tunnel timbers and presumably another mill will be required later further out on the line.

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GOOD SADDLE STOCK OR GOOD CARS?

By C. B. Webster, Pike

Shortly after reading Mr. Kartchner's article on the front page of the SERVICE BULLETIN for September 8, I was on the minority end of an argument with two other Forest officers. If their arguments and beliefs are true, then there is no need to worry about good saddle stock for the Service.

For, they argued, the day of the horse in the Forest Service is past. With the coming of Forest Highways and Forest Development roads, the automobile can carry the Forest officer anywhere on the Forest that he needs to go. And where the car cannot go, only short hikes from the parked car are necessary.

They contended that the saddle horse will average only three miles per hour on the trail, and that a man can do as well afoot whenever it is necessary to leave the car. When I advanced the argument that a car kept the Forest officer on the highways and thus caused him to overlook those parts of his territory where there are no roads or trails, they came back with the argument that we have no business where there are no roads or trails, for no forest user would be found there; and for what other reason than to see the Forest users and inspect timber sales and such did a Forest officer travel?

They admitted that there might be times in case of fire when a few horses could be used to advantage; but in such a case the horses could be rented. They were positive that a Forest officer without a car was no more efficient than a district ranger without legs.

Such an argument isn't altogether new. I have heard the same thing advanced several times during the past two or three years. More and more the idea is spreading. If it be true, then we need not worry about good saddle stock. The real question is: Shall the Forest officer furnish his own car or shall the Service furnish a (standard) car?

Is the saddle horse or the automobile the most efficient mode of travel for the field men of the Service?

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A SHOT IN THE TIRE MAY SAVE A FIRE

By R. W. Ayres, Tahoe

A fire-flinging motorist who was stopped and called to account by a rifle shot through his tire fired by a determined Forest Guard is the latest story in the development of fire protection.

Alex Carston, Forest Guard on the Truckee District of the Tahoe National Forest, and an unknown motorist who is blind to all fire warnings and dead to any sense of decency of behavior in the mountains, are the principals. On the evening of July 20th, while returning on horseback from Lake Tahoe to his station at the Old Richardson Mill, Mr. Carston's attention was attracted to the number of cigar and cigarette stubs which were lying along the road, evidently thrown out of passing autos. He counted over fifty as he rode along the main road between Tahoe Tavern and Carnelian Bay; meanwhile his indignation was rising at the proof of such general carelessness. At the psychological moment he was passed by two men in a machine, one of whom threw out the burning butt of a cigar. He called to them to stop, but instead of doing so they speeded up. Without any hesitation Carston pulled his 30-30 rifle from his saddle scabbard and at the first shot punctured the rear tire on the machine, which resulted in an immediate compliance with his request.

The owner of the machine, who was evidently the fire-flinger also, at first threatened Carston with arrest, but after a short conversation he was satisfied to be allowed to proceed with no further cost or damage, and the incident was closed.

If one may venture an opinion, it is believed that Carston's action was fully justified. There are three things which are increasing according to statistics: the number of auto parties in the National Forests, the smoking of cigarettes, and forest fires! and these three things are directly connected. Motorists and travelers are welcome so long as they are capable of behaving in a rational manner and of using the National Forest resources in a way which will not injure public property or interfere with the rights of others. People who, in spite of all the warnings which are now being given and in such a season as California is now experiencing, throw burning tobacco out of autos, deserve a warning, and if they do not stop to receive it at the hail of a Forest officer they should be stopped somehow - and Carston knew how.

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FOREST PRODUCTS LABORATORY

Fungi Aid Lumber Interests: How *Cenangium abietis* girdles and causes the death and so-called natural pruning of the lower branches of western yellow pine, hence aiding in the early production of clear lumber, is told by Dr. W. H. Long in the July issue of PHYTOPATHOLOGY. Suppose the foresters and the lumbermen will want this fungus protected and propagated to help grow clear lumber.

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Indian Forests High Revenue Producers: Forester Kaul of India, who visited the Laboratory recently, stated that the net yearly profit for the government forests of Kashmir alone was in excess of $3,000,000. Part of this is because in some sales the Government sells the material at auction after it has been cut by some contractor. Practically all the forests are under more intensive management than are our own forests and apparently utilization is more complete.

Grazing regulation is a problem not only because of the age-old unrestricted use of the forests but because of the position that animals occupy in the native religion. Modern forestry was first put into practice in India approximately 40 years ago, although India has for a very long time had some form of forestry conservation.

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FOREST EXPERIMENT STATIONS

Capacity of the Chipmunk and Mantled Ground Squirrel for Western Yellow Pine Seeds: Experimental tests of the capacity of certain forest rodents for western yellow pine seeds carried on at the Southwestern Forest Experiment Station show the following results:

Tests of the Rocky Mountain Mantled Ground Squirrel (*Callospermophilus lateralis*) showed an average number of seeds eaten per 24-hour period to be 340. Similar tests showed 237 as the average number of seeds eaten in the same length of time by the San Francisco Mountain Chipmunk (*Entamias cinereicollis*). If a family of 6 Mantled Ground Squirrels and 3 families of Chipmunks, 6 each, or 18 Chipmunks and 6 Mantled Ground Squirrels altogether, live on an acre, their daily capacity for pine seeds would be more than 6,000. The average number of seeds produced by normal trees in the good seed years 1909 and 1913 was 23,023. (Pearson, U.S.D.A., Bull. 1105, p. 12). Four seed trees to the acre at this rate would produce 92,092 seeds. One family of Mantled Ground Squirrels and three of Chipmunks could eat this number of seeds in less than two weeks. One cannot help wondering what happens in poor seed years. Other forest rodents in the western yellow pine type, all of which probably feed on pine seeds (Abert squirrel, white-footed mouse, meadow mouse, wood rat, and rock squirrel) are not taken into account. These figures raise the question whether four seed trees to the acre are enough under these conditions. Things look bad for the rodents, to be sure, but it is not necessarily implied that all the rodents should be immediately exterminated even if they could be. For their possible services in planting pine seeds, thinning overdense stands, pruning overfull tree crowns, cultivating the soil, or combating enemies of the western yellow pine have not been worked out. The entire subject seems to deserve study.--Walter P. Taylor, Biological Survey.

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DISTRICT 1 - NORTHERN DISTRICT

Coeur d'Alene to Acquire Another Logging Railroad: The Coeur d'Alene is now advertising 34 million feet of timber on East Eagle Creek, of which 20 million is white pine. Theminimum rates considered are $6.25 for white pine, $2 for spruce and lodgepole, $1.50 for larch and Douglas fir, and 50 cents for white fir, hemlock and cedar. The contract will require the construction of 10.67 miles of logging railroad, which will become the property of the United States after the contract is completed. This sale includes only the cream of the timber on East Eagle Creek, being restricted exclusively to the white pine type, although there is a large amount of Douglas fir and larch on the upper slopes not included in the sale. A sale of this character is justified only on the basis of the construction of permanent improvements which will become the property of the Government. It is expected that by the time the sale is completed it may be possible to handle the fir and larch on the remainder of the drainage, since the railroad will be complete and in place, and there will consequently be no cost for major improvements for handling this timber.

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Rutledge Parker, Supervisor for a longer continuous period than any other District 1 man holding that office, severed his connection with the Service on May 30 and retired to his ranch in the wilds of Rattlesnake. Rutledge has the best apple orchard in those tracts and his home is a show place and the acme of hospitality to his friends. His co-workers of long standing made him a visit one evening and presented him with an auto lunch kit in token of their esteem and in hope of his continuing to eat, whether at home, afoot, or aford. Rutledge will be missed by all who knew and associated with him. May his apples increase!

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Conservation of Wild Life: While working on a forest fire on the Flathead early this season, Ranger Thompson found a nest of young ducks in a small patch of unburned brush and small timber which was surrounded by fire. With the assistance of one of the men he hastily trenched a small area around the nest, and as he was leaving he noticed the mother duck's return. Passing by the nest in the evening he found the fire trench had held and the duck family quite safe, although surrounded by hot ashes and the smoking remains of the forest.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Fire Hazard Closes Large Area in Colorado: Despite efforts to maintain the freedom of camping in the National Forests of Colorado, the constantly increasing hazard made it necessary to close three Forests along the eastern slope of the Continental Divide to all camp fires except those built in constructed masonry fire places found at improved camp grounds. The Colorado, Pike, and San Isabel were included in the order. In addition to this two small areas were closed to all entrance by the public, and another large area in the vicinity of Pikes Peak was closed to all fires whether in improved fire places or not because of the extreme danger to the 7,000 acres of young planted forest in this region.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Heavily Timbered Section: The revised estimates prepared on the Sitgreaves National Forest for use in the management plan show one section on that Forest in the Mogollon Working Circle having an estimate of 17 million feet. That this amount of timber could be found on any one section in the Southwest has been seriously doubted by the men familiar with stands of western yellow pine. In connection with the stumpage appraisal work, the section was examined and a check estimating strip run over four measured acres running across the drainage. The strip was two chains wide. The first acre had 55 live trees with an estimate of 29,690; the second acre, 37 trees with an estimate of 20,670 feet; the third acre, 41 trees, 17,490 feet; fourth acre 47 trees, 34,400 feet. This shows an average of close to 25,000 feet per acre which, if applied to the section which is all timbered would, with the trees below 12 inches, of which there was a large number, yield close to the revised estimate.

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The Worst Country Yet: Perry and Westveld, according to the Carson Pine Cone, report they are now going on their third set of hobnails on the State timber cruise. They state they are working in the roughest piece of country the Almighty ever attempted to make and gave up as a bad job - that there are enough malpais rocks on that mesa to supply the entire State of Texas and have enough left over to render all the roads of Kansas impassable - that there are canyons so wide the ravens have to relay to fly across them, and that the country is so newly heaved up from the infernal regions that it still smells of brimstone.

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Horses Like the Old Home Place: Recently two saddle horses belonging to Ranger Boone of the Manzano left their official station without leave. Several days of search failed to produce them, but about ten days after the disappearance a telegram came from Capitan, Boone's old home, reporting that the horses were there. They had traveled about 200 miles to get home.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

The Old Juniper In Famous Logan Canyon: The juniper tree in Logan Canyon is attracting more attention each week.

A careful examination of the tree by Dr. Hill and Dr. Nuffer of the Utah Agricultural College and by Supervisor Arentson of the Forest

Service shows the tree to be not less than 3,000 years of age. In determining the age many interesting factors were brought out; for instance, but a few hundred years ago the tree was growing as rapidly as at any time during its life, while its struggle for a start seems to have been under very adverse conditions, a section of the heartwood showing that 200 years were required for the first two inches of growth. Later the tree was adding two inches in sixty years which is remarkable after considering the location and age of the tree.

The diameter breast high is 7½ feet and the tree is 42 feet in height. Undoubtedly this is the oldest juniper in the world and the record indicates that there are not more than eight or ten trees of a greater age.

The presence of this tree so near the main Logan Canyon highway will add another attraction to the many sorts of beauty and interest in Logan Canyon and everyone should unite in giving the tree protection and in seeing that no one defaces or injures it. At the present stage of growth but little injury will be required to cause the death of the tree.

The Forest Service has placed a sign upon and in the vicinity of the tree informing the public of its age and giving warning that it must be protected.

The U. S. criminal code gives ample authority for the protection of the tree and Supervisor Arentson has stated that the tree is to receive the protection of his department and that any act of defacement or injury will be prosecuted.--Logan Journal.

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DISTRICT 5 - CALIFORNIA DISTRICT

That's All-Fired Slow Travel Time: On July 14, Lumberman Price rushed the Evinrude pump to an abandoned landing on the Standard Lumber Company's sale area and drowned out a fire that had suddenly resurrected itself after smouldering unseen for seven months and four days. This fire will have to be classed as anaerobic, for it held on from December 11, 1923, when piled brush was burned along the railroad right of way, until July 13, 1924, without a sign of smoke to indicate its presence. On July 14 it could hold its breath no longer and so burst forth only to be spotted immediately by a track walker.

The area had been covered with snow when the brush was burned and all looked safe, but it developed that a small line of fire had run several feet under the snow, burned its way downward to the bottom of a pile of bark and debris about three and one-half feet deep and then slowly worked its way to the top at the average rate of slightly less than two-tenths of an inch every twenty-four hours for 215 days.--M.R.B., Stanislaus.

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Popular All Right: A private recreational development on the Cleveland Forest now being widely advertised has chosen for a name "National Forest Country Club." In the advertising material considerable capital is made of the fact that it is located within a National Forest.--L.A.B.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Three in One: A serious fire occurred in the Paisley District on the Fremont on July 14 from wood-cutting operations near Reed Corrals. On August 3 another fire was started in the same vicinity through the carelessness of another set of woodcutters. Ranger Ewing was notified of the fire by the lookouts and started for it with one man, requesting a follow-up crew of six men to be sent as soon as possible. The second crew arrived about the time the fire was under control and part of them was left to patrol it while Ranger Ewing went back to Paisley for supplies. When he returned he found that one of the men had secured a bottle of whiskey and was endeavoring to persuade the other men to leave the fire, and making personal threats against Ewing. One of the men left after he had promised to patrol the fire during the night.

Suspecting one of the party of having carelessly thrown down a lighted match or cigarette, Ewing placed him and another woodcutter whose camp fire was found unextinguished under arrest. Ranger Ewing was on his way to the J.P. with these men when he met the man left to patrol the fire. Upon being asked why he had abandoned the fire the man answered that he did not care to spoil his clothes fighting fire! So he was also placed under arrest and brought with the other men to Lakeview for trial. Upon hearing the case Justice of the Peace H. J. Angstead found all three men guilty of violating the Oregon State fire law and fined each one.

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DISTRICT 7 - EASTERN DISTRICT

Lumber Companies Loosen Up: A little team work recently made it possible to arrange that the Department of Agriculture would send its forestry exhibit to the State fair at Little Rock, Arkansas, in October. In connection with this there was a freight bill to be borne by the State fair authorities amounting to $119. The State fair authorities were hard up for money. The Arkansas office solved the difficulty by inducing six big lumber companies in Arkansas to contribute about $20 each toward this expense. The same six companies are cooperating with the Supervisor in procuring attractive local exhibit material to supplement that furnished on the regular Department circuit.

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

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THE PACEMAKER OF FOREST FIRES

By W. I. Hutchinson, D-5

The pacemaker of man-caused forest fires is the pernicious cigarette. In the National Forests of California, out of a total of 1,539 timber and brush fires that occurred to September 10 of this year, 28 per cent was due to smokers - and in practically every case that means cigarette users. And the number of such fires is steadily increasing year by year, keeping stride with the steady rise in the use of "fags."

United States Treasury Department figures disclose the fact that during the month of July, 1924, there was manufactured a total of 6,583,000,000 cigarettes; an increase of 750 million over the number turned out during the corresponding month in 1923. If this pace is maintained throughout the current fiscal year there will be made and sold in this country more than 77,000,000,000 cigarettes.

The Bureau of Internal Revenue reports that the consumption of cigarettes in the United States has increased 50 per cent in the last two years. Manufacturers of the "pills that satisfy" are turning out this year almost 1,200 cigarettes for every man and woman in the country over 21 years of age, or an average of three cigarettes for each person per day. And yet these same manufacturers, despite their knowledge of the fact that cigarettes are the chief cause of countless disastrous fires, have never yet given their whole-hearted support to any movement for public education in fire prevention and suppression.

This season in California, due to the hazardous fire conditions, smoking has been restricted to camp grounds and improved places of habitation on many of the National Forests. And it may not be a far cry to the day when like restrictions will be enforced on all hazardous fire areas. Anyone who has followed closely the fire game knows that the safeguarding of our forest wealth depends in no small measure on more complete and effective control of human agencies which cause fires, -

including smokers, campers, sportsmen, recreationists and commercial users of National Forest lands. The handwriting is on the wall, and it is to be hoped that among smokers and vacation seekers, as well as cigarette manufacturers, there may be found the Daniel of forest preservation who will interpret the all-too-plain inscription.

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BARK-BEETLE EPIDEMICS AND RAINFALL DEFICIENCY

By Lenthall Wyman, Southern Forest Exp. Sta.

My observation on epidemic attacks of bark beetles has been confined to a few localities in the South where the trees attacked were being turpentined. Accordingly, the relation between insect damage and deficient precipitation has been obscured somewhat by the added factor of chipping and its undoubted weakening effect on the tree.

It is usually recognized among turpentine operators that a prolonged dry spell during the chipping season sufficient to cause a considerable lowering of the water table is followed by a slowing down of resin production. Trees "dry face" badly during such periods and some operators claim that it does not pay them to chip during such times. It is reasonable to think that trees which have been weakened to the point where they can no longer perform their normal function of resin production in the usual way would offer less resistance to insect attack than they customarily do. In other words, an insufficient resin flow could not so easily drown the insects out. Moreover, the presence of these dry-faced and dying trees in a stand is a direct invitation to bark beetles. The relation between dry spells and lessened resin production seems to indicate that Dr. Craighead is on the right path in looking for a relation between epidemics and weather conditions.

I had occasion in September, 1923, to visit a tract of timber in Florida, where considerable damage had been reported resulting from bark beetle attacks. About two million feet of overmature longleaf and slash pine had died in 1922 and during the spring of 1923. Beetles submitted to the Bureau of Entomology were identified as being southern pine beetles. At Waylonzo 600,000 feet of timber were killed and at Cross City a considerable body of old slash and longleaf was killed out at that same time. The epidemic died out during the summer of 1923 at Cross City and no further reports of damage have been received from the other two locations. In each case the trees had been rather severely turpentined, faces had been run together, and the chipping was too deep, so that there was a great deal of dry face and a number of dead trees. In 1923 the beetles had attacked round timber (unturpentined).

Weather records for Fenholloway, a few miles from the first named location in Taylor County, showed that the rainfall in 1922 was 41.56 inches or a deficiency of 16.93 inches. During the first part of

1922 there was a slight excess, and a total excess for the year of 1.49 inches over the average. The rainfall was 58.37 for that year. The last six months of 1922 showed a deficiency of 5.31 inches and the first four months of 1923 showed a deficiency of 1.26 inches. Then followed very heavy rains in May and June, 1923, with an excess of 9.86 inches for these months which are normally rather rainy ones in any event. This surplus may have stopped the epidemic which seems to have lost ground at that time.

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HOW SHOWLOW, ARIZONA, GOT ITS NAME

By Will C. Barnes, Washington

Recently the District 3 Bulletin contained an item regarding the odd manner in which the settlement and valley known as Showlow on the Sitgreaves Forest in Arizona was named. The item was considerably in error as to the facts, which were many times told to me by Mr. Cooley himself, one of the principals in the case.

Corydon E. Cooley, who served as a Government scout in Crook's campaigns against the Apache Indians in 1872 and 1873, located on what is now called Showlow Creek in about 1875. He and another man named Marion Clark made the settlement together. The men believed there was only room for one location, so they agreed to play a game of Seven-Up to decide which of them should move, leaving the other in possession. When the last hand was dealt Cooley needed but one point to win. Clark ran his cards over and said to Cooley: "If you can show low, you win." Cooley threw down his hand and said, "Showlow it is," and it has been called Showlow ever since.

Clark later on moved higher up on the creek near the present town of Pine Top and located another ranch where he lived for many years. McClintock in his "Mormon History of Arizona" makes practically the same statement as to the origin of the name.

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REFORESTATION ON THE MICHIGAN NATIONAL FOREST

By R. H. Johnson, Michigan

When the Michigan National Forest was placed under administration in 1909, an examination of the type of land comprising the main acreage of the Forest convinced the Forest officers concerned that, second to fire protection, reforestation was the big job to be undertaken.

The Forest, a typical jack pine sandy plain, had become repeatedly burned over until fully 50 per cent of the area supported no tree growth and but a sparse ground cover of grass, huckleberry or small bushes. Experiments to determine how best to artificially restock this area were at once commenced, varying from widely different methods of direct seeding, such as seed spot with hoe or corn planter, to broadcast sowing, using various amounts per acre and under different methods of sowing, to planting Norway wild stock pulled from the Minnesota Forest and shipped to Michigan in the spring of 1910. As all work must finally be judged by the results obtained, the direct seeding system was abandoned after the second year because of the lack of any living trees in evidence. However, the small plantation of Norway wild stock lived and continued to grow during this time and while the costs appeared abnormally high, $24.77 per acre for 13.5 acres, the results were apparent in a good stand of living trees, and the solution of the reforestation problem appeared brighter. The next problem was to secure lower costs in the planting operation. From this small nucleus planting has increased until the total reached 5,814.8 acres at the close of the 1923 planting season. Of this acreage 4651.8 which has passed through one or more growing seasons shows 4,159.2 acres now supporting more than 500 living trees per acre, 404.8 acres with between 250 and 499 living trees, and but 9.9 acres classed as a failure with less than 100 trees.

During the past three years, 3,232.2 acres have been planted mostly with Norway pine two-year seedlings using an average of 680 trees per acre at an average cost of $3.81 per acre, including all cost of planting and stock production. The lowest cost was secured in 1921 when 1,151 acres were planted at an average cost of $2.93, using 630 trees per acre. In the fall of 1923, 1,158 acres were planted to 2-0 Norway pine, using 716 trees per acre at a cost of $3.64 per acre.

During the past eight years, all planting has followed the furrow system, by which shallow furrows are plowed and the trees planted at the bottom of the furrow. By this system the number of trees planted per day per man averaged 2,700 for the entire operation during 1923, while many days, when no change was made in the personnel of the crew, the number exceeded 3,000 per man.

The average first-year survival counts for the last three years show 85 per cent living at the close of the first growing season, while the fifth year counts for the same period show 77.8 per cent.

A fully equipped modern nursery is now in operation at East Tawas, having a possible annual output of 2,000,000 trees.

Plans are under way to plant 2,000 acres of Norway pine during the season of 1924 and with high expectations that this acreage may be greatly increased before many years.

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CONFERENCE ON WOOD UTILIZATION CALLED BY SECRETARY WALLACE

A national conference on the utilization of forest products to be held November 19 and 20 at Washington, D. C., has just been called by Secretary Wallace.

This meeting is the first attempt on a nation-wide scale to include the economical use of timber supplies in the national forestry program along with timber production and fire prevention.

In announcing the conference, the Secretary asked 150 representatives of wood-using industries, consumers, the building crafts, and the general public to name 2,000 men and women to whom invitations to attend the conference should be sent.

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FOREST PRODUCTS LABORATORY

Laboratory Man Writes Prize Story: F. J. Mosley, editor of research publications at the Laboratory, has been awarded the first prize of $1,000 by the "Forum" magazine for his story, "The Secret at the Crossroads." The story is a study of the race problem and it will be printed in the November issue.

In the past, Mr. Mosley has written for various technical publications and has also done some writing of a more general nature.

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Governor Pinchot Strong Supporter of Laboratory:

Senator Fletcher: We would be glad to have your views as to a national policy.

Governor Pinchot: There is only one thing I want to mention before coming to the general forest problems, and that is forest research. I have come to be a very strong believer in the value of forest research, and in the value of the Madison Laboratory, with which you are no doubt familiar.

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WASHINGTON NOTES

Washington Office Getting Back to Normalcy: With the return of the Forester a few days ago, the offices in the Atlantic Building (wonder why D-5 has never insisted this name be changed to Pacific Building) have taken on a more normal aspect. Mr. Carter, Mr. Norcross, Mr. Smith, Mr. Barnes, and Mr. Loving are the Branch Chiefs now answering reveille. Mr. Headley is still in the field and Mr. Kneipp is in charge of the National Conference on Outdoor Recreation, a temporary detail.

With Col. Greeley's return the final touches are being put on the budget estimates and on the annual report. It is believed that the deficiency appropriations to cover fire fighting will run around $1,000,000. That gives a good idea of how serious our fires were this season.

Oh, yes - the Washington baseball team has won the American League pennant. The President did not declare any holiday, but it was difficult to muster a corporal's guard around the Atlantic Building when the Giants faced our beloved Walter Johnson in the opening game of the World Series.--M.H.

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DISTRICT 1 - NORTHERN DISTRICT

What One Exceptional Fire Can Do to the Year's Record: During 1923 there was one fire on one North Idaho Forest which burned 6800 acres.

Include that fire with all the other North Idaho fires and that group of Forests has a record of burning three-tenths of one per cent of its net area in that one season. Eliminate that fire and the net loss would have been only seven-hundredths of one per cent. That one fire made the net loss 4 times as great as it would have been otherwise for a group of five Forests!

Include that fire in the records for the entire District and the 1923 loss was six one-hundredths of one per cent. Eliminate that fire and the loss would have been three one-hundredths of one per cent, or one-half as much!

Include that fire with the 650 other fires in the District and the average area per fire was about 21 acres. Eliminate that fire and the average would have been 11 acres per fire!

The cost of this fire was just about one-fifth of the total fire-fighting expenditures of the District, and the damage done by it nearly as great as by all other fires in the District combined. From this you can see the importance of keeping every fire small.--H.R.F.

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National Service Honor Awarded Camp Fire Girls for Putting Out Forest Fire: Six members of the Spokane Camp Fire Girls crossed Mica Bay and put out a forest fire which had covered considerable ground. A trench was built and the girls stayed with the fire all night. The papers carried a news item in regard to the incident. It came to the attention of Mr. Shoemaker, and he suggested that recognition be shown by the national organization. The following is quoted from a letter from Miss Francisco, Executive Secretary:

> "You will be interested to hear that a national service honor has been awarded to the six Camp Fire Girls who put out the forest fire in the vicinity of Camp Sweyolakan this summer.
>
> "I took the liberty of sending your letter and the newspaper clipping into national headquarters and they wrote us a nice letter saying that they were delighted to award the service honor which is awarded only on rare occasions. The girls are so thrilled about it and we are very grateful to you for the recommendation."

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Trapping Gophers on the Nebraska Forest: The Biological Survey has been cooperating with the Forest Service for a number of years in exterminating pocket gophers which in times past have caused considerable damage in the Nebraska Forest plantations. Heretofore, poisoning was followed entirely, but this has not proved so efficient as trapping. A crew which has been working on the Halsey plantations for several months has trapped 2,018 gophers on about 10 sections of land. It has been noted that gophers do not come in where the trees are dense and have attained a height of over 10 feet. Possibly this is because the dense roots make it difficult for the gophers to push their burrow through the ground.

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Labor Day Picnic on Nebraska Forest: Ever since the Bessey Nursery was established an annual picnic has been held on Labor Day. This is considered one of the big events of the year in that portion of the Nebraska Sandhills. Between 500 and 600 people attended the Labor Day picnic this year, which is a large crowd for that country when it is considered that Thomas County, where the Forest is largely located, contains only about 1,000 people. Congressman Simmons, who succeeded the late Hon. M. P. Kinkaid, who represented the Sixth Congressional District of Nebraska for 22 years, was present and was the orator of the day. In addition to explaining the nursery work and showing the people some of the older plantations, there was a baseball game as well as the usual Wild West stunts.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

How the Average District Ranger in D-3 Puts in His Time for a Year:

	Days	%
Sundays, holidays, annual and sick leave, etc.	50	14
Overhead duties, supervision, headquarters, M.&S., etc.	73	20
Fire prevention and suppression	30	8
Improvements, construction and maintenance	57	16
Timber sales and all S work	26	7
Lands adjustment, uses, and all L work	31	8
Grazing administration, Fish & Game all G. work	90	25
Unclassified work miscellaneous jobs	8	2
Total	365	100

Of the 73 days overhead, headquarters gets 40, maintenance personally owned equipment 10, mail and supplies 13. The average hours in a day's work is about 9.

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Second New Mexico Fish Hatchery: The Gila and all southwestern New Mexico are rejoicing over the completion of the Jenks Cabin Fish Hatchery. It is a log building of two rooms, one 18x20 and the other 18x10 feet. There are ten wooden troughs 12x1 feet in the hatching room with capacity when used for summer hatching only of 300,000 fry. This is said to be enough to take care of the present needs of the district while the plant has been built so that it can be increased in size at small cost. Water is conveyed in iron pipe from Jenks Spring by gravity to the hatching troughs. It is planned to open the hatchery in July with 250,000 eyed eggs of black spotted trout. The major portion of the fry when large enough will be planted in the streams of the Gila River drainage but some will go north into the tributaries of the Frisco River on the Datil.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Those Kaibab Deer: The Kaibab deer, about which so much has been written, have not been completely covered by their press agents, according to Mr. Baker, who has just returned from the Kaibab where he tried to take their picture. A series of reports have been prepared telling about how much they eat and how fast they multiply, but has the fact that a buck can go thirty miles an hour ever been recorded? The above speed was determined by Mr. Baker after scientific tests in racing with the deer in V. T. Park. The animals invariably want to pass the road in front of the car and will not slow down and go behind. Furthermore, he learned that the deer can be approached as close by a person making all the racket in the world as when you try to sneak up on them. In taking their picture, the sound of an automobile horn is about the only thing that will make them lift up their heads and look intelligent. They do not talk English, for in talking to them and encouraging them to lift up their heads, language of sufficient intensity was used to scare a band of horses about a quarter of a mile away, but the deer took no notice.

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DISTRICT 5 - CALIFORNIA DISTRICT

National Forest Fire Summary (January 1 to September 10, 1924): 1,539 forest and brush fires, 66 per cent of which were caused by careless acts of man, occurred in the National Forests of California during the period January 1 to September 10, inclusive. Of this total, 334 fires occurred during the first ten days of September. The total area of Government and private lands within Federal Forest boundaries that have been burned over this season is 506,000 acres. Up to September 10, the U. S. Forest Service spent $575,000 in fire suppression. Fifteen of the seventeen National Forests of the State report 194 law enforcement cases against violators of State and Federal fire laws, with convictions secured in 174 cases.

The Forests which have had the greatest number of fires this season are: Klamath, 293, of which 236 were lightning fires; Shasta, 218; Plumas, 150; Trinity, 138; Tahoe, 130; Lassen, 116. Individual brush and forest fires that have burned from 10,000 to 35,000 acres or over have occurred on or adjacent to the Cleveland, Angeles, Santa Barbara, Sequoia, Sierra, Stanislaus, Tahoe, Plumas and Shasta National Forests.

Causes of forest fires on National Forests to date this season are as follows:

Lightning ----	34 per cent	Railroads --------	4 per cent
Smokers ------	28 " "	Brush burners ----	3 " "
Campers ------	11 " "	Lumbering --------	3 " "
Incendiaries -	8 " "	Miscellaneous ----	9 " "

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"Safety First" Camp Grounds: One form of camp ground development largely overlooked on most Forests is the inexpensively improved little one or two-party camps that can be made along any forest road. We all know that nine campers out of ten will seek out an improved camp in place of cleaning up a virgin area. It also greatly reduces the fire hazard to have people camp where the ground has been cleaned of brush, limbs and pine needles.

It does not take long to clean up a spot 50 feet square, stick up a rustic table, place a few rocks for a fireplace and tack up a campers' sign. It is surprising how much such areas will be used during a season, and these little cleared spots may prevent many fires that might be set by people who camp in isolated spots where the fire hazard is high.--L.A.B.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Real Detective Work: The following case illustrates how action in fire trespass is sometimes secured where clues seem to be entirely lacking.

On July 6 the launch crew found a fire near the shore of Lake Chelan at Box Canyon, an isolated point where people would not be likely to camp. A wrapping paper from a Spokane store was found where some party had camped and also firecrackers scattered around where the fire had started. Inquiries made at Chelan produced a man who had put in there with a boat while the party was there. This man reported that the party had traveled in a canoe. The canoe was traced back to the end of the road at 25-Mile Creek, to which point it had been brought by them in their car. At another place where they had camped on 25-Mile Creek a newspaper was found bearing a man's name and address. Inquiry through the police department at Spokane revealed that the newspaper belonged to a man in the party. From him were secured the names of the other members, all living in Spokane. They responded readily to inquiry and one of their party returned to Chelan to plead guilty. For this reason and since they were ignorant of the laws and had taken extreme precautions with their camp fire, the judge imposed a minimum fine with costs.--P.T.H.

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DISTRICT 7 - EASTERN DISTRICT

Capture Bear Cubs: While retracing a line of the Lennig Survey back to Rawley Springs on the Shenandoah, E. R. Conrad, Jack Haile, engineers of the Forest Service, and James McDorman, a local man, encountered a she-bear with two cubs. They immediately gave chase and the mother left for parts unknown, leaving the cubs to shift for themselves. Each of the cubs thereupon climbed the largest chestnut oak tree he could find, nor did they stop until they had reached the highest branch. While Conrad stood guard with his six-shooter, lest the old bear should return, Haile succeeded in securing his cub and returned with it safely to the ground. McDorman accidentally killed his while trying to snare it. After a heated argument with the little piece of bear flesh, Haile succeeded in wrapping the youngster in his coat and carried him back to Jim Robinson's, where the party is staying. Haile says he is going to keep his bear for a mascot and take him back to Texas with him when he goes home.

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

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WIDTH ALONE DOES NOT DETERMINE THE SERVICE OF A ROAD

By T. W. Norcross, Washington

The 9-foot road has been a topic of general discussion, principally within the Service, of course, but to some extent by the public who wish to travel back into the Forests. On the whole, the sentiment seems unfavorable to the minor road standards as they are understood. Although personally I believe that the construction of roads only 9 feet in overall width is sometimes justified, I am far from enthusiastic over such narrow roads because of the probable increased maintenance burden and especially because the 9-foot roads will often fail to give the required service. But approval or condemnation of the minor road standards must not be based on the factor of width alone. Basing my opinion on the discussions I have heard or read, I am convinced that the element of width has been greatly overestimated and that far too little consideration is being given to drainage, alignment, gradient, and the several other elements which go to make up the road standard. There is a marked need also to get rid for all time of the idea that a road of any given standard width should be of that exact width uniformly - not one inch more or less.

Expenditure upon road construction is made in order that certain definite service to traffic or property may be given. The road should be so designed that it will give that service. If it doesn't, we must expect and surely will receive criticism and even condemnation. Many factors enter into the road design and go to form the standard. One improperly selected element of the standard may prevent the road from giving the required service, or, while not making the road a failure as far as service is concerned, may result in unnecessary expenditure of money. Except where all elements of standards are in perfect coordination, some one or more of these elements control the service of the road and the speed of travel. It is essential then that the service to be given be constantly considered when the several elements of standard are selected.

In condemning or approving the minor road standards, certain specific roads are thought of. For such roads, are all elements of standards properly related to each other and to the service required for the road? If not, which element is too high or too low? Possibly this may be width, but it may be drainage, alignment, or something else. If there is not perfect coordination or if the service which it was planned the road should give is not secured, some portion of the road money has been poorly used.

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Editor's Note.**This is the first of a series of road articles by Chief Engineer Norcross. The discussion in the BULLETIN of the 9-foot roads awakened a very general interest in all phases of Forest Service road work. Largely as a result of this interest Mr. Norcross has prepared his series of articles.

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THE NATIONAL FORESTS

By F. J. Hagenbarth, President, National Wool Growers' Association

(Reprinted from The National Wool Grower)

In various State meetings I have noticed a tendency on the part of certain radical wool growers to misunderstand the attitude of the National Association toward the National Forests. The fact that our State organizations as a rule and the National Association itself differs from the policy and proposed plans of the Department of Agriculture and the Bureau of Forestry in the matter of commercializing the forests and raising fees at this time, does not mean that wool growers generally, with the exception of a negligible minority, do not recognize fully the splendid service which the Forests have performed for the livestock industry.

Our only regret has been that the jurisdiction of the Forests has not been over larger areas of the range territory. Generally speaking, Forest administration has been satisfactory and of a high degree of efficiency and intelligence, and these facts are recognized by the great majority of stockmen. The forest policy has been the one bright outstanding star in the black night of our Government's inefficient and unintelligent land policy during the past twenty-five years.

The forestry officials are assuredly entitled to their own opinion of the fee question, and in like manner so are the stockmen. An honest difference of opinion as to the commercialization of the Forests and profit-making plan connected therewith must not be allowed to arouse in the hearts of livestock men any feeling of antagonism toward the

Forests themselves and the officials thereof, nor should it be allowed to lessen our appreciation of the splendid work done in the past, nor our desire for helpfulness to the Forests for better things in the future.

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LOW WATER BRIDGES

By Verne Rhoades, Pisgah

Low water bridges have been constructed by Caldwell County, North Carolina, for many years. These structures have been placed across rapid mountain streams characterized by sudden floods. They have stood the test of high water repeatedly. The usual objection advanced by engineers to the low water bridge is that except for piers and abutments the first cost is about as great as in the case of high water spans. This is true, but there are places and conditions that warrant the low water type. Such crossings, for example, where the approaches are over low ground and long trestles, would be required to run up to a high bridge; or where funds for construction are greatly limited the type of structure is determined by that fact. In other words, a case of low bridge or no bridge.

The county's bridges are unusually well built, with concrete piers set, if possible, in bed rock. Large bolts firmly set in the concrete hold the stringers in place.

The bridges slope upstream, with the downstream side about 8 inches higher than the upstream side. This applies to a width of 12 to 14 feet.

The upstream stringer is placed 8 or 10 inches above the normal depth of the stream. This allows an ordinary freshet to be taken care of readily. The heavy floods may cover the bridges for two or more feet. The downward pressure of water flowing over the bridge is often as great or even much greater than the pressure against it. This downward pressure helps to keep the bridge in place during high water.

Adopting this principle, Ranger Monroe Coffey has put in three low water bridges between Edgemont and Mortimer on Wilson Creek. They are made without concrete piers. Where bed rock was near the surface of the water, as it happened to be generally, log sills were bolted to it by means of $1\frac{1}{2}$" iron rods driven three feet into the rock and wedged there by a piece of metal inserted in the split end of the bolts. The log stringers were tied both to sills and to bed rock. It is best to place them at right angles to the stream, as there is then less tendency toward undermining of these sills or piers that could not be tied to bed rock.

Of the three bridges put in by Ranger Coffey, one is built on a curve and is 120 feet long. The other two are straight across the stream and are 70 feet long. The entire cost of construction, including excessive cost of getting sills and stringers from the Forest because of scarcity of good timber, will not be more than $300 per bridge. The cost may be $25 to $30 less.

These bridges have not yet been subjected to flood conditions, but inasmuch as those built by Caldwell County have been tested repeatedly, we feel that our low water timber bridges will have a life that will more than justify their cost.

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A MAN'S JOB

By G. M. Hunt, Forest Products Laboratory

Making a forest on the sand hills of Nebraska is no child's play. The Nebraska National Forest, containing over 300 square miles of sand hills, was set aside over twenty years ago by Theodore Roosevelt at the urgent request of some farsighted, public-spirited Nebraskans. Unlike most of the land now in National Forests this area was not withdrawn from public entry as a forest reserve. There was no timber on it. It was set aside as a place to make a forest. Up to the present perhaps fifteen square miles of the area have been planted to jack pine, western yellow pine, Scotch pine, Austrian pine, and a few other species, with the jack and yellow pines predominating. The progress made by some of the earlier plantings is very encouraging and many of the trees would make fence posts now. It must take a lot of courage, however, to keep up the battle against drought, insects, disease, and fire when a man can look back and see only five per cent of the ground covered in over twenty years. It is a job that needs doing for the benefit of this great sandhill empire, but only Uncle Sam with his long purse could be expected to finance it.

Some day these hills will support a sizable timber industry. They may not produce sawlogs in a generation, but they will produce good crops of fence posts, poles, and firewood, all of which will be a great boon to this treeless territory and bring a good income to the Government and to the local communities. This is a goal worth working for in a country where they now cover the sand roads with hay to keep them from blowing away in the winter, and then fence them to keep the cattle from eating them up.

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IS IT FAIR?

Miss Jewel Dawn of our office is mad this morning. She says within the past week three Forest officers from other Districts or Washington have asked to see the District Forester without announcing they were Forest officers. None of them wore uniforms or the badge and she had no way of knowing they were Forest officers. Part of her job is to see that 80 per cent of the people who ask for the District Forester are directed to the proper Office Chief and when a Forest officer pulls the same stuff he usually resents being asked his family history before being ushered into the District Forester's office, whereas his name would prove to be an open sesame.

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WASHINGTON NOTES

The Inquiring Reporter At His Worst: An able representative of the SERVICE BULLETIN on his rounds in search of news has interviewed several of our citizens as to their ideas on various matters with which they are supposed to be familiar.

E. E. Carter: "I must decline to be further interviewed on the subject of National Forest boundaries on the Chugach in Alaska. I have remembered that the Atlantic Building is not fireproof."

Will C. Barnes: "It is untrue that I narrowly escaped being lynched for advocating the killing of surplus deer on the Kaibab. The attention of the mob was diverted to Walter Johnson."

Henry Wold: "This thing of preparing for the annual hearings before the House Agricultural Committee is getting on my nerves. They should be absolutely prohibited by law."

Miss Randall: "It was really astonishing to note the falling off in trips to the Secretary's office and the Department during the week the official car was in the shop. A matter of cause and effect I presume."

C. E. Rachford: "No, I do not believe the foot and mouth disease can be contracted through eating animal crackers."

J. Girvin Peters: "I must positively refuse to state where, when, and how I secured two separate sets of tickets for the World Series."

E. A. Sherman: "Please deny for me the statement that I hear is being broadcast to the effect that I secured my Ford car as a premium for one subscription to the Dearborn Independent."

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Assistant Forester Barnes Speaks to Fur Industry: The winter's after-dinner speaking season opened in Washington this past week with Mr. Barnes prying open the first inning with a home run at the Raleigh Hotel before a session of the National Association of Fur Dealers, of which David C. Mills, a good friend of the Service, is president. Mr. Barnes told the fur dealers their interests were closely tied up with the National Forests and the protection of all forested areas.--M.H.

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FOREST PRODUCTS LABORATORY

Good Poetry but Not Good Timber Mechanics: "Good timber does not grow in ease, The stronger the wind, the tougher the trees," or "The more the storm, the more the strength," lines from the poem, "Good Timber," in the September 8 SERVICE BULLETIN may have helped out the author's comparison of man and tree, but it certainly is not the "Common Law" derived by our timber mechanics research. Guess it's a case of the old well-recognized Poetic License, and may thus be forgiven. Who would expect a poet to be bound by scientific principles, anyway?

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About Saws and Sawmills: A manuscript of the 13th century describes the first water-power sawmill. The first sawmill in England, 1663, was abandoned because of rioting among the sawyers who were afraid they would lose their jobs. In America the first sawmill was built in Maine, 1634.

The first circular saw used in America was made by a country blacksmith in 1814, sawing about 1,000 feet a day. Gradually various forms of inserted tooth saws were developed. Now circular saws run at a speed of almost ten miles a minute. The first band saw was patented in 1808 and in 1876 a 6-inch-wide band saw was exhibited at the Centennial Exposition.

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FOREST EXPERIMENT STATIONS

Another Name for Zon: No man in the Service has been called as many names as the Director of the Lake States Experiment Station, but it remained for the Christian Science Monitor to hang another one on him. In complimenting the recent "Farmers Day" held at Cloquet, the Monitor mentioned "the supervisor of the Cloquet station, Dr. Raphaelzon".--M.H.

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DISTRICT 1 - NORTHERN DISTRICT

A Short Story on Forestry: Some time ago the proprietors of the People's Home Journal offered a prize for the best short story not to exceed ten words in length. The prize went to the author of the following:

"Sunrise, majestic virgin forest;
Midday, receding voices;
Sunset, blackened waste."

In commenting on the separate contributions the editor said, "The first prize went to a story that in its limits of ten words implies an all too familiar tragedy of one of our greatest natural treasures."

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Last Direct Seeding in D-2: The last lodgepole pine seed which was extracted in this District was planted on the Turpin Creek burn on the Medicine Bow Forest in the fall of 1919 and 1921, comprising a total of 460 acres. It was not uncommon some 10 or 15 years ago to sow 5,000 acres a year, much of which was a failure. In contrast, the seeding on the Medicine Bow was quite successful. Recent examination shows an average of 1,785 seedlings per acre on the 1919 plantation while there are 833 seedlings per acre on the 1921 plantation. In addition, almost as many spruce seedlings have come in on the latter plantation from seed trees which escaped destruction along streams. This fire occurred in 1915 and was very destructive. It was only decided to seed the burn in 1919 after it was discovered that no seedlings had come in naturally up to that time.

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How Far Will Sparks Carry? If you ask any old Ranger on the Superior, he will probably tell you that "God only knows." Instances of one-fourth mile are of common occurrence. Several men have had experience with three-quarter mile jumps, as on the Dam 7 fire in 1923, and we have former Supervisor Brownell's statement in the land classification report that in 1910 "high winds carried burning brands across Birch Lake, a distance of one mile." I have been informed that during the great Cloquet fire of 1918, lakes over one mile wide were jumped with hardly a perceptible slackening in the speed of the fire. Given the right kind of light, inflammable material such as birch bark, for a carrier, the swirling heat of a large fire to raise it, and a heavy wind to carry it along, and we would not bat an eye if someone was to tell us fire will carry across a lake three or four miles wide.--A.L.R.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Steps and Apple Rows in Place of Chains: A permittee on the Lincoln, according to the Bulletin of that Forest, says a neighbor's fence is fifteen steps too far south and that on the east it is eight apple rows over on Forest land.

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Lightning Does It: A Santa Fe Ranger "takes the dog" as his Supervisor says, on his explanation on an 858 for the loss of one inkwell. Here it is: "Broken on desk by bolt of lightning which presumably followed radio aerial into house, and which also demolished radio receiving set."

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Must Be Interesting Trip: The "Dixie Remount," a group of three Colorado men with a bunch of ponies have taken up residence near the Catalina Division of the Coronado Forest. They are already doing a good business in furnishing horses and guides for mountain trips. According to their advertisement, one of the trips takes the intrepid tourist from the "Angel's Flight" through the "Gates of Hell" and into the "Devil's Bath."

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Developments at Bryce Canyon: The Union Pacific Company has finished 16 two-room cottages, and bigger cottages, including a kitchen, will be finished this fall. The company is developing the area in fine shape and expects to advertise the canyon extensively during the winter, and heavy tourist travel next year is looked for. They have agreed to do considerable work in developing the public camp ground adjacent to their cottages and hotel and will handle the immediate supervision of this area.

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Lamb Weights Good: Practically all of the lambs off the Cache were sold and shipped about September 1. The weights were fully up to normal, some of the lambs making 80 pounds in the east and the general run was from 75 to 80 pounds. The heavy weights were really an agreeable surprise to the sheepmen. The condition of the cattle on September 1 was normal, but there was little feed left for the fall.

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Prize Fire Slogans: In connection with the California State-wide campaign for fire prevention, the Rod and Gun Department of the SAN FRANCISCO EXAMINER ran a cash-prize fire slogan contest. Out of the 750 slogans received the following were selected as winners by District Forester Paul G. Redington, who acted as judge of the contest.

1st - Carelessness and haste bring fire and waste.

2nd - First enjoy, then destroy that camp fire.

3rd - On highway and by-way, wherever you roam,
Be as careful with fire as though you were home.

Consolation Prizes

Forest fires great damage do;
Please be careful - this means you.

A firebug - a criminal; a forest fire - a crime;
A fire out before it starts is a fire out in time.

Forgetful folks furnish food for forest fires.

Guard California's forests as you would your
home. They are yours - protect them.

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He Warn't No Lion Tamer: While patrolling the line, on the Dunbar fire, one of the fire fighters was attacked by a huge mountain lion. Only prompt action on his part saved the lad's life. Leaping upon a burning log he began scraping up coals and throwing them at the beast. By the time both boots were ruined and his overalls on fire, his wild yells brought the rest of the crew to his rescue. Guard Bill came running down the line - stopped and stared - and then yelled, "What in ____ are you trying to do to my dog?"--F.Mc.

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Livestock and Pasture Conditions in California: The California Cooperative Crop Reporting Service gives the conditions of both cattle and sheep as declining during August. The condition of cattle on September 1 was 82 per cent of normal as compared with 94 per cent one year ago; sheep 83 per cent of normal as compared with 96 per cent one year ago.

The condition of pasture in the State on September 1 was about 52 per cent of normal as compared with 83 per cent on September 1 last year and a nine-year average of 80 per cent.--J.W.N.

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Water Storage Possibilities: The possibilities of Clear Lake on the Santiam Forest as a source of water supply for the Willamette Valley towns are being exploited to the fullest extent. Recently a party of prominent business men from all over the valley, including the Governor and several other State officials, made the trip to Clear Lake for the purpose of estimating the feasibility of the Clear Lake Municipal Water and Power project, the possibility of reconstructing the old Santiam Wagon Road, and looking over the proposed Fish Hatchery at Upper Soda. A barbecue was held at Fish Lake and all members of the party expressed themselves as much pleased with the courtesy and consideration shown them by the Forest officers at the Lake.

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Wood Rat Gets New Teeth: Leland Spoffard employed as cook for the trail crew up Herman Creek on the Mount Hood Forest one night in August took out his upper set of false teeth and laid them on a stump close to his tent just before going to bed. The next morning after dressing and washing he looked on the stump for them and to his surprise found they had disappeared. Upon close examination it was found that a large wood rat had carried them off.

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Man-Caused? A very unusual and expensive fire occurred on the Wallowa Forest in August. A small sawmill operator on Powhatka Ridge has been using two trucks and trailers for hauling lumber to town, taking 5 M B. F. at a trip. One truck had gone only a short distance when a bolt came out of the drive shaft, letting the end become unfastened. It soon jabbed a hole through the gas tank, allowing 25 gallons of gasoline to escape under the truck and it was immediately ignited by the exhaust. The first the driver knew of the fire was when the flames singed his hair and eyebrows. The loss will be perhaps $1,500 with no insurance. About an acre of National Forest land was burned over.

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"Tailormades" Banned: The Pelican Bay Lumber Company on the Crater Forest prohibited the use of tailormade cigarettes on their operations on both Government and private land, during the 1924 fire season. As a further aid in this rule, "tailormade" cigarettes were not sold at the commissary during the fire season.

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DISTRICT 7 - EASTERN DISTRICT

New Flooring Plant on the Unaka: The construction of a large flooring plant equipped with all new machinery of the latest model has been completed and placed in operation at Damascus, Virginia. This new enterprise employs about 50 men, and although it is not solely dependent on National Forest stumpage, being located on a branch of the N. & W. R. R., which extends into a well-timbered section of North Carolina, its location almost in the heart of the Unaka National Forest affords a new market for practically all of the oak and maple timber on the Shady and Damascus Working Circles. It also gives employment to the people of Damascus, who are largely dependent on wood-using industries for a living.

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Competition is the Life of High Stumpage: The Arkansas has just advertised about 8,000 M of timber, 90 per cent shortleaf pine and 10 per cent oak of rather poor quality. The advertised price was $6.55 per M for both species. A bid from the applicant was expected but no others. To the surprise of everyone, three bids were received by October 7, the highest being $9.67 per M for the pine and $10 per M for the oak. One bidder asked to be notified of the result by wire, so that if unsuccessful he could bid on another chance now under advertisement. He was advised to try again on that chance, since bidding about $2.50 per M over the advertised rate was not enough this time.

The cut will average only 3 M per acre.

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Good PR Work on the Arkansas: Rev. G. H. Edwards of Alf, Arkansas, recently conducted a series of revival meetings at Shady schoolhouse near Shady Ranger Station, Arkansas National Forest. At Ranger Payne's request he preached a sermon on conservation. He drew very vivid pictures of the depleted forests of the country, contrasting present conditions and prices of forest products with conditions a few years ago. Attention was called to what the Forest Service is doing in an effort to protect the forests and grow timber to meet the demand, and to the fact that it is a violation of the law to burn the woods. Rev. Edwards asked that people be law-abiding in this matter, as well as in others. Before beginning his address he called upon Guard Will Egger for some fire signs. Two of these "PREVENT FOREST FIRES - IT PAYS" and "EVERYBODY LOSES WHEN TIMBER BURNS" were posted in the pulpit. The United States flag was placed over these signs.

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DISTRICT 8 - ALASKA DISTRICT

First Prize Again: The third annual Southeastern Alaska Fair came, passed and has not yet been forgotten. September 17 to 20 was get-together time in Juneau, a period when many communities of S. E. Alaska sent specimens of their industry and resources for display.

During the first fair in 1922, which was only for a two-day period, the Forest Service took first premium on an exhibit of various Alaskan forest products. The second annual fair covered a three-day period and was larger in every respect. The Service booth was again awarded first premium with a display which featured the water power resources of S. E. Alaska. A miniature power site in full operation attracted much attention and aroused many favorable comments. By the way, another Department of Agriculture bureau, the Biological Survey, took second prize at this fair with a very attractive and interesting exhibit.

This year's fair, the time of which was extended to cover four days, promised to be still more successful in every way. And it was. Recreation was to be our specialty, and since game protection is hand in hand with the recreational use of the National Forests it was decided to combine the Biological Survey and Forest Service exhibit in one. Accordingly, quite a good sized booth was furnished us in which to "put over" the possibilities of S. E. Alaska from the hunter's, fisherman's and camper's standpoint. The center of attraction in this booth was a life-sized camp scene constructed so as to look like the real thing. It was all there - a lean-to made of hemlock boughs, camp fire and fire wood, coffee pot and utensils, gun, bedding, socks drying near the fire, and all that goes to make up a typical overnight camp in the woods. A scene painted on the background, together with the proper lighting effects, helped to finish off the setting.

Only one criticism was expressed and we acknowledged it as truly just. The hand towel hanging from a limb looked too clean! Needless to say, that was soon remedied and the change really helped to make the scene look more natural. Perhaps that delicate touch of displaying a real he-man towel helped us to get first premium again! Who knows?--H.S.

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

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MOBILITY

By Jno. D. Guthrie, D-6

There has always been more or less discussion in the Forest Service of the question of periodic transfers of Forest Supervisors and Rangers from one Forest or Ranger District to another. Supporters of the idea have urged that breadth of view, wide experience, background, training in judgment, and general all-around efficiency would be secured by such periodic transfers. Opponents have urged, with equal insistence, that such a system inevitably meant loss of time and efficiency while the man became familiar with the new territory, its geography, its local public, and its problems; moreover, that the cost both to the Service and to the individual would not be commensurate with the proposed advantages. Questions of ownership of real estate by the officer concerned, to say nothing of the personal wishes of the individual and his family, were also brought in.

What effect will reclassification have on this question of transfers of Supervisors and Rangers?

Reclassification is based on the definition of the job and the allocation of a salary scale commensurate with that job. It is obvious that the system presupposes that the proper personnel is or will be assigned to the proper job. Is that the situation in which the Service found itself on July 1, 1924? Probably not. Reclassification of field officers has not yet been approved by Congress; the salary readjustment of July 1 is an emergency and temporary one, based, at least tentatively, on the proposed reclassified field jobs. All Forests and all Ranger Districts have been classified, with the result - I make bold to venture the assertion - that in some cases at least men are in charge of first-class Forests and first-class Ranger Districts who do not measure up to the responsibilities of the jobs. Obviously certain shifts must be considered before reclassification can be made finally effective in the field.

Furthermore, under the principle of rewarding efficient service by increased salary, along with increased responsibility, it appears certain that shifts and transfers of field officers in the future must be more frequent than in the past. The Service must have a more mobile personnel in the future. It is well now to face this fact squarely.

This would seem to mean, among other things, that Forest officers must be discouraged, if not prohibited, from becoming owners of local ranch properties and real estate, if such ownership is to be used as an argument against the following out of the principles of reclassification. Too often in the past it has been the case that personal business has occupied a disproportionate share of the officer's time and attention, as compared to the Government's business. Too often a Ranger has become almost a pensioner, living on his own ranch or property, with the consequent demand of the chores and business of running the ranch, unconsciously perhaps, occupying more and more of his attention. It is well to remember that so long as we are in Uncle's employ we are paid to handle the Government's business, not our own.

Personally, I have always believed strongly in transfers. Not too frequent, nor merely for the sake of a change, but I believe that practically every Supervisor would be tremendously helped as a Forest officer if he were transferred at periods of about five years, and that practically every Ranger would be helped very much by a transfer about every three years. Nor would I confine transfers to officers on the Forests. Reclassification is coming and it will mean more shifts and transfers of Forest officers; we shall have to become a mobile personnel.

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MORE ABOUT ACCIDENTS ON ROADS

By T. W. Norcross, Washington

Those who are interested in the subject of accidents on roads and how to prevent them will enjoy reading an article by E. W. James in the August issue of "Public Roads." The title is "Traffic Control and Safety." One of the most interesting features to me is a list of the principal dangers of the road, this list including the following: (1) Blind curves and road intersections; (2) Sharp curves on embankments; (3) Unprotected embankments; (4) Narrow bridges; (5) Sharp convex vertical curves; (6) Slippery road surfaces; (7) Steep grades; (8) Narrow road surfaces; (9) Low or rough shoulders; (10) Steep crowns; (11) Sharp curves at bridge and underpass approaches; (12) Grade crossings; (13) Unsuperelevated curves.

There is a strong inference from this list and from other portions of Mr. James' article that the narrow crooked road would be considered dangerous by him.

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THE SUMMER OF TWENTY-FOUR

By R. W. "Bummer" Ayres, Tahoe

Smoke and dust, fever and sweat,
The damndest season I've put in yet;
All you can hear, or think, or do,
Is fighting fire the season through.
All other work has gone to pot,
Our working plans are completely "shot."
(Suffering cats, will it never rain!)
My heart has a knock, my nerves are frayed,
My stomach's gone, my feet are splayed,
My eyes are dimmed from the back-fire smoke,
My lungs are sore, and my back is broke.
(Out in the West, where men are men,
It hasn't rained since Lord knows when!)
A column of smoke and a windy day;
It mushrooms up and drifts away.
But under that pillar of pearly gray,
Is the same old fight in the same old way.
Thirst and sweat, worry and grime;
She's jumped the line time after time
With a rip and a crackle, a rumble and roar;
We call for help and try once more.
(When winter comes, we won't be sore!)
The open spaces are free and deep,
The mountain slopes are long and steep;
The darkling canyon and rocky peak
I've climbed them all, 'till my legs are weak.
Scenery is what some folks may desire,
But it's rotten stuff on a forest fire.
(Oh, sunny Cal. is a joyful land;
It is like H---! Ain't Nature grand!)
A holiday for me would be,
On a southern isle in a balmy sea,
Where I could sleep, and eat, and shave,
And bathe myself in the purple wave;
In its tropical rains with its glad downpour,
I'd dream of the Summer of Twenty-four.

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MAKE THE STOCKMEN LIKE THE NEW GRAZING FEES

By L. H. Douglas, D-2

There is a tangible though uncertain "when" and an intangible "if" about the new grazing fees becoming effective. They are to go into effect in 1926 to 1930. That's tangible enough. Stockmen promise to have Congress knock them in the head. That introduces an element of uncertainty. But even if Congress doesn't step in, they are not to become effective unless the livestock industry recovers from its depression. That's decidedly intangible.

It is my humble opinion that the range cattle business in 1926 will be only convalescent if improved at all, and will be in a wheel chair if not flat on its back. At any rate, those who are not so pessimistic as I am will probably agree that it will be hard to prove that the condition of the industry has improved. This proof might not be necessary if a policy bearing directly on the fee question itself and looking toward an improvement of the industry were announced.

Revised policies, it is true, have already been announced which are intended to stabilize the industry. I refer to the term permit and protection from reductions in permit numbers. But something more is needed. I feel that something is fundamentally wrong with the range cattle business and that it cannot improve until it goes on to a new basis. That basis is the production and marketing of young beef -- nothing older than short two-year-olds. But to do that the range industry must go into the cow and calf business, and to successfully do that on the range the calf crop must be increased materially. The grounds for my opinion cannot be given here. They would require a discussion of supply and demand for beef in the United States (kind and amount), of exports and imports of beef, of market prices of different aged animals, of handling and feeding costs, of losses and other points. I'll merely ask a question to emphasize my point. Who is getting greater net returns now; the range cattleman who gets an 80 to 90 per cent calf crop, sells that crop as weaners, yearlings or short twos, or the one who gets a 50 to 60 per cent calf crop and carries that crop through two or three winters? Are the conditions that govern your answer likely to change for years to come?

Here is my point, then. Can the Forest Service charge increased grazing fees and still help out in getting the industry on a young beef marketing basis?

The method I have in mind would be to shorten our summer grazing seasons on the front end and encourage our permittees to purchase and lease low altitude pastures in which practically all of the breeding would be done before turning on the Forest, under the most favorable conditions, with resultant maximum calf crop. The usual summer season on the Forest would then be from July 15 or August 1 to October 31, instead of May 1 or May 15 to October 31.

Now let me answer some objections before they are raised:

1. The total revenue to the Government would not be materially less, at least after a few years, because a proportionately larger number of stock would be grazed for a shorter period, and by doing away with early use the Forest ranges would improve greatly in forage production.

2. Where are these low altitude breeding pastures to come from? Dry land homesteads, principally 640's and 320's, are becoming available to the stockmen for lease and purchase at prices representing their true worth - at lower cost for lands which can be fenced than for years heretofore. Some of the early ranges at lower elevations of the Forests could well be fenced, also, for this purpose.

The foregoing is not intended to apply to Forest ranges providing yearlong grazing, nor to those used in connection with desert winter ranges. I am not sure, however, that even in a yearlong grazing operation it would not be feasible and profitable to gather the breeding stock in the spring and place them in fenced breeding pastures.

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PORCUPINE STUDIES AT THE SOUTHWESTERN FOREST EXPERIMENT STATION

By Walter P. Taylor, Biological Survey

Individual porcupines have been maintained in yards for several weeks in order to determine, not so much what the animals do under natural conditions, but what kind of food they eat and how fast they eat it. In Yard 1 up to August 18 a single porcupine (at a time) had removed on an average of 26½ square inches of western yellow pine bark per day, or more than 502 square inches in 19 days. Seedlings and other trees attacked were 21 in number. Eight of these, or 38 per cent, were girdled. The trees in Yard 2 (which were more numerous) must have tasted better - or possibly the porcupines liberated in this inclosure were hungrier individuals. At any rate, in this yard a single porcupine (at a time) had removed, up to August 18, a total of 1837½ square inches of bark from the various trees, or an average of 54 square inches a day for 34 days. No less than 121 seedlings and other trees had been attacked to that date, 76 of these, or nearly 63 per cent, being girdled or so seriously injured they are dying. In the last fifteen-day period forty additional branches on the larger trees were newly attacked. The porcupine is found to eat not only juicy portions of pine bark but also pine needles. It feeds a great deal on herbaceous vegetation on the ground also, being fond of the leaves and tender twigs of buckbrush (*Ceanothus fendleri*), and consuming also two kinds of lupine, an *Astragalus*, a lotus, the basal leaves of a composite (*Helianthella*), of a thistle (*Carduus*), and those of *Artemisia dracunculoides* at least and probably *A. mexicana* also. Contrasts between the ground vegetation inside and outside the yards are becoming conspicuous. The captive porcupines bid fair soon to eat themselves out of house and home so far at least as ground vegetation and seedling pines are concerned.

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WASHINGTON NOTES

Family Gatherings Begin - Col. Greeley First Speaker: In the auditorium of the National Museum on October 1 the Washington office inaugurated its bimonthly family meetings for the 1924-25 season. As a preliminary feature there was a showing of that flaming, romantic, and forest-scented two-reel masterpiece entitled "Trees of Tomorrow," by our own inimitable scenario-writers, Tom Gill and Wallace I. Hutchinson.

Following the film Col. Greeley in a half-hour talk, told of a number of the outstanding incidents that occurred in connection with the forest fires which have harassed California during the past summer, pointing out some of the important lessons driven home by these fires, and indicating in general terms how these lessons should be given practical application in future fire prevention plans.

It will be the aim of those having charge of the meetings to arrange programs that will give members of the Washington office a general understanding of all major Forest Service activities and objectives. It is hoped that it may also be possible to devote at least one meeting to Service history and traditions. The National Museum Auditorium has been definitely assigned to the Service for five of these meetings.--H.I.

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Wild Rice and Other Aquatic Foods for Wild Fowl: For the information of Forest officers who may receive requests for addresses of firms furnishing the seeds of wild rice or other waterfowl foods for planting in swamps and ponds, the Wisconsin Aquatic Nurseries, 523 Body Street, Oshkosh, Wisconsin, is ready to supply any amount of these seeds and will furnish full information as to the best methods of planting.--W.C.B.

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FOREST PRODUCTS LABORATORY

Hardwood Standardization Work Receives Trade Journal Approval: Highly favorable editorial comment characterizes the attitude of leading trade journals toward the hardwood standardization program recently launched here.

The American Lumberman states that "Another chapter in the national movement for conservation, economy, and efficiency in the lumber industry has opened auspiciously," and believes that "The thanks of the whole industry are due to Director Winslow and his helpers for the splendid service they have rendered in this movement."

Various journals print the entire report or parts of it, and the Hardwood Record says editorially that "This meeting will disclose fundamental and valuable facts - never before revealed and will bring about a closer utilization between purveyors and consumers of hardwood lumber."

If there is any influence in the power of the press, it would seem that hardwood grading has been given a good start.

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Radio Research at the Laboratory: Radio has long ago been the chief devotion after hours (and late hours) of more than one Laboratory man, and recently it invaded our working hours when tests of various radio battery shipping containers were made to improve their design and construction.

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DISTRICT 1 - NORTHERN DISTRICT

Ain't it Funny What a Difference Just a Few Years Makes? It is presumed that all readers of the SERVICE BULLETIN have more or less of a "speaking acquaintance" with the Bible and recall the difficulties encountered in building the Tower of Babel. The "Babylonish Jargon" was introduced and dialects installed as a nonefficiency measure to defeat the completion of the structure.

I can appreciate the situation more fully after meeting an old friend of mine, Ranger John Benham, on the Jefferson last summer. It seems that John has developed considerably as a botanist during the last few years and can warble such grass and weed "monakers" as Zygadenus gramineus, Bouteloua gracilis in a very fluent manner. At any rate John was in beyond my depth most of the time. On the other hand, when I spoke in terms of "primary triangulation," "geodetic coordinates," etc., a look of bewilderment came over John's placid countenance that was painful to see. It was evident that we no longer spoke the same language. As in days of yore "the tongues of men had become confused."

And yet, in 1911, when I made my "maiden tour" in the Service, it was into Ranger Benham's district, and due to the fact that I was a native product and John was an old round-up foreman, we understood each other perfectly. When such words or phrases as "jerking the dogies," "tossing the twine," "gut wrenches" (spurs), "cayuses," etc., were used, neither of us had to scratch his head, wear a puzzled look, guess or stall to keep up with the conversation.

As in days of old, is the result of all of this specialization going to be our downfall? Isn't there a moral for those of us who are trying to "sell" the "Public Relations" activities about which we hear so much these days? How are we going to make the "sympathetic" public understand us when we have difficulty in conversing among ourselves? Without intending to do so, aren't we apt to get a little too technical for the average man with whom we do business? Shouldn't we be careful and use very common language on such occasions? Think it over.--J.B.Y.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

1924 Colorado's Driest Year: According to the reports of the Weather Bureau, this has been the driest season in Colorado for the past 37 years. The precipitation at the Monument Nursery for June, July and August was 3.08; this is 5.02 inches below the average. The effect of this drought is noticeable in the results secured in the 1924 Pike plantations which are located a few miles west of the nursery. It is probable that not more than 25 per cent of the trees planted last spring are now living. On open, exposed slopes, Douglas fir is practically a failure, but under protection of aspen survivals as high as 60 per cent were secured on north and east exposures. Yellow pine survived better on the open places and not so well where planted in the scrub oak brush.

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Dr. Charles C. Adams, Director of the Roosevelt Wild Life Forest Experiment Station at Syracuse University, was a recent visitor to the District Office on his return to New York after spending the summer on the National Forests of the west.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Timber Marking: Somebody speaking through the SERVICE BULLETIN said a mouthful a while ago about the forester who wields the marking ax; about the conditions left behind on the ground as a measure of his ability for decades in the future as against a flashy PR spiel. We fellows out here in the sticks have a distinct advantage in the use of the ax that does not come equally to all foresters. We can mark almost any kind of a tree and get away with it. The results of our marking may be observed the same day or a few days later. So let's be sure we are exercising that master hand to a nicety, whether we be thinning up or down, making an improvement cutting or harvesting the mature crop.

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Scaling and Scaling:

Lady Visitor at Training Camp: What have the Rangers been doing to-day?

Husband: Scaling logs on the sale area.

Lady Visitor at Training Camp: I didn't know they had to remove the bark from the logs!!!

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DISTRICT 5 - CALIFORNIA DISTRICT

Singed but Safe: The San Gabriel fire on the Angeles National Forest, after burning for over 20 days and covering some 50,000 acres of brush and forested land, was finally brought under control on September 20 after a bitter fight waged by 2,000 men. Col. W. B. Greeley and Major Evan W. Kelley of the Washington office, together with some 15 D-3 Forest Service officers and a number of the D. O. men from San Francisco, were on this fire to assist the local Angeles force. The Los Angeles County Forester's fire organization and many members of southern California fire protective associations fought side by side on the fire line with Federal officers.

Deputy Supervisor F. L. Kirby of the Tonto National Forest, Arizona, had a very narrow escape on this fire. Kirby was on an inspection tour of the burned area in the Roberts Canyon country and was trapped by the flames. Col. Greeley in describing Kirby's experience said:

"I doubt if Kirby will ever give you a complete account of his experience on the San Gabriel fire. When the fire broke into Roberts Canyon below and behind him, he had ample time to get around it, but went on up the canyon to warn a messenger whom he had previously sent in that direction. In searching for the messenger he stayed too long and every chance of getting out from the fire, which was then coming up both sides of the canyon, was gone.

"By pure luck or Providence, Kirby found what I am told is the only waterhole in that whole canyon, containing about two feet of water. The fire burned up the canyon and went over him while he soused himself in this pool and got what air he could by breathing close to the water. As it was, I personally think his escape from suffocation was very close. It is this sort of stuff in Forest Service men that always shows up in emergencies and that constantly renews one's pride in the organization."

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DISTRICT 6 - NORTH PACIFIC DISTRICT

One Kind of Cooperation: Mr. and Mrs. Harry Corbett of Portland (Mr. Corbett is a member of the Oregon State Legislature), who have a summer home on the Metolius, were just starting out on a camping trip over in the Eight Lakes Basin with Mr. and Mrs. Bruns of Camp Sherman and Tom Frothingham of New York City, when they heard that we needed more help on the Wasco Lake fire. They immediately turned around (they were five miles out) and came to the fire with their saddle and pack horses and Mr. Corbett and Mr. Frothingham were of great help for four days and nights packing supplies to the men. Mrs. Corbett offered to do the cooking at the main camp where there were seventy-five men. We had a good cook, so Mrs. Corbett with Mr. and Mrs. John Bruns went back to their ranch and worked all night baking pies, doughnuts and cakes and had them in camp at nine o'clock the next morning in time to go out with the lunches. They also looked up a doctor who was camping near-by and made arrangements for his services in case he was needed. When Mr. Corbett was asked what the bill was he walked over to the commissary and took a package of cigarettes and said - "This - and I am not going to pay you a cent for it either."

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DISTRICT 7 - EASTERN DISTRICT

Ranger's Slayer Has Trial in November: The trial of Robert Weldon, alleged slayer of Forest Ranger Bud Jones of the Arkansas National Forest, is to be held during the latter part of November. According to Supervisor Plymale, the good citizens of Yell County are raising funds to aid in the prosecution, the members of the Forest force have rendered considerable assistance to the prosecuting attorney, and valuable evidence has been secured to strengthen the State's case.

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AND PENCILS?

"It has often been remarked that in addition to the various necessary constituents of the soil and climate, an immense amount of PAPER has always seemed to be necessary to make the forests flourish."--Journal Cambridge University Forestry Assoc.

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ANOTHER ARGUMENT FOR TOWN FORESTS

The city of Ebersbach is arranging with an English banking house for a loan of 1,000,000 "Rentenmarks" to be used in financing building construction. The security for the loan is to be the 7400-acre city forest.—Deutsche Forstzeitung Aug. 15, 1924.

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

Vol. VIII, No. 43. Washington, D. C. October 27, 1924.

THE LOW-DOWN ON THE TAILOR-MADE CIGARETTE

By Miller Hamilton, Washington

Much discussion, with emphasis on the "cuss," has raged about the tailor-made cigarette. It is likely that even more discussion will rage before the Service is finished with the subject. Hence, a little straight stuff on why a tailor-made is deadlier than the roll-your-own may not be out of place. Bear in mind while you read this that the low-down comes from the tobacco experts in the Department. I make this explanation to head off any blasts that may be directed at me for dispelling some of the pet illusions held by Service men anent the much-damned tailor-made.

According to the Plant Industry specialists, chemical treatment of tobacco is not an established practice. This applies to saltpeter as well as other chemicals. However, manufacturers of machinemade cigarettes are in the habit of treating the papers with potash salts, or other mineral salts, to insure high combustibility and even burning. The ordinary papers used for handmade cigarettes are not so treated. This would be one reason for the higher combustibility of machinemade cigs.

Another factor is the kinds of tobacco used in machinemade cigarettes. Most tailor-mades are made of a blend in which Turkish and other foreign-grown tobacco enter. These tobaccos are naturally much more combustible than the straight Virginia and Burley tobaccos which are ordinarily used in rolling your own. Hence, the ordinary machinemade cigarette is much more free burning than the handmade from the standpoint of tobaccos used.

In other words, if the same tobaccos would be used in both machinemade and handmade cigarettes, the combustibility would not differ so much provided the same kind of paper was used and the moisture content was about the same.

Another factor is the degree of looseness with which the cigarette is rolled. Machinemade cigarettes are usually rolled tightly and firmly, whereas most handmade cigs are rolled loosely. This again is a factor in combustibility.

Lastly, there are many kinds of tobacco that naturally contain saltpeter. It is a property of the tobacco itself. And it is these tobaccos that enter into the blends used much more generally for machinemade cigarettes than for handmade snipes.

So much for quoting the experts. Now let's take a Camel, rip it open, and then roll that same tobacco in a paper used for handmades. Tests here showed that the cigarette would go out if it were laid down. Here the paper and the degree of looseness were the factors. Take a Piedmont or a Home Run, both of which are made out of domestic tobacco. They, too, will go out by themselves. And yet they are tailor-mades. Here the tobacco is the controlling factor.

What does all this prove? Nothing. The only object of this article is to give all Service men the low-down on what makes a machinemade cigarette more deadly than the handmade so that all future discussion of the subject can be carried on with all of us in full possession of the accurate distinctions between the two kinds of fags. The one important illusion dispelled by the tobacco experts is that machinemade cigarettes are treated with saltpeter. On the contrary, saltpeter is a natural ingredient of most foreign-grown tobaccos.

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SADDLE HORSES vs. AUTOMOBILES

By Leon C. Hurtt, Nezperce

C. B. Webster reports an attempt to uphold the minority end of an argument on the affirmative side of the question as to whether the saddle horse is an obsolete article of equipment for a Forest officer. Had I been present at the argument, Mr. Webster, you would have had at least equal voting strength with the other two Forest officers mentioned and some arguments. Of all the obstacles to good administration, I can think of nothing more dangerous and fatal than the attitude that the full use of saddle horses is unnecessary on the average National Forest.

Speaking generally, based on some experience out of a District Office on inspection work, no other single set of figures is so valuable an index of satisfactory administration on the ground as a high saddle horse and a low car mileage. There are some exceptions to this rule, it is true. The evil of poor showing on travel by saddle horse is so well recognized that many Supervisors limit strictly the car mileage and do whatever is necessary to insure a maximum of saddle horse travel per month.

Theoretically, a man can walk in a day as far over mountain trails and over the Forests generally as a saddle horse. In practice does he do it and carry at the same time the 10 to 20 pounds of paraphernalia that appears to be about the minimum that most Forest officers need in their daily work? You know the answer as well as I.

I find it very difficult to hold myself within due bounds and hesitate to say more than a small part of what might be said on the subject. Unless I misjudge the bulk of Forest officers, there will be a number who may have a word to say about the propriety of the automobile replacing the saddle horse on the Forest.

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NEW MEMBER OF D-7's FAMILY

By James E. Scott, D-7

District 7 acquired a new National Forest when President Coolidge on October 3 signed the proclamation bringing 78,500 acres, or 81 per cent, of the Fort Benning Military Reservation near Columbus, Georgia, under National Forest administration. This is the first National Forest created under Section 9 of the Clarke-McNary Act, which provides for National Forests on existing military or naval reservations with the consent of the Secretary controlling the reservation and subject to the regulations and plans mutually agreed upon. The War Department will continue to enjoy unhampered use of the entire area for military purposes but this will not interfere with the successful conduct of the forestry work. This newest Forest has an excellent stand of southern pine which will be so handled as to yield the forest products necessary for the local military use and a surplus for sale under our regular procedure. It will be known as the Benning National Forest.

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STRIPES AND CITATIONS

By Harry H. Hunt, Angeles

A stranger stopped the writer the other day asking for information, which was given. The conversation then turned to Forest Service activities in general, during the course of which the man asked how long I had been in the Service. When he was informed he made the statement that Forest officers should have some distinguishing emblem showing their service record, which in itself would tell the layman whether he was approaching a man with experience or a beginner in the work.

This conversation has been the source of food for thought, entering a new argument in the field and supplying a motive which has probably not been considered as much as it should be. I have never been strong for decorations, outside of the small badge on the coat, and the arguments pro and con appearing in the SERVICE BULLETIN have not brought any more definite convictions - but this is different. The uniform itself used to be a distinguishing feature of the Forest officer's standing, but in these days when it is copied by the various public and semipublic agencies, amongst which we find messenger boys, chauffeurs, and bell-hops, it has lost a large per cent of its personality.

The argument for some insignia setting forth at a glance the wearer's station in Service life has been made conclusive to the writer by the above mentioned conversation. Whether this insignia shall be stripes, stars, or whatnot; whether in uniform or out of it, I am convinced that most of us have come to desire a clean-cut designation that will not mislead the public to believe we are boy scouts, Y.M.C.A. workers, messenger boys, or chauffeurs, even though any one of these may be just as honorable a job.

Citations may or may not have any bearing on the individual officer's position before the public. If it has a bearing tending to increase efficiency, fine; if it has not, --------. As a rule, heroism becomes heroics in such a case, and the next step is heroines, a few of which may be good, but not in a Forest officer who contends he is a he-man. Whatever citation must come, let it be such as will be of value to the administration of real service to the public, in a "keep on your toes" spirit, not for the sake of what has been done, but for the larger place in the sun of a satisfaction of the inner knowledge of unselfish service to the great ideal of the public weal.

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WASHINGTON NOTES

Examination Being Held for Silviculturists: The Civil Service Commission has announced an examination for silviculturists and assistant silviculturists to fill vacancies in the Forest Service, at the forest experiment stations. Anyone interested can get full information from the Branch of Research. Salaries for these positions range from $2,400 to $3,800. Examination closes November 11.

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Authors Galore: The Atlantic Building houses many authors these days. Col. Greeley has had several articles published this summer, the one on Forest recreation in the Review of Reviews having attracted a great deal of attention. Mr. Sherman has broken into print several times on the Northern Pacific Railway case.

Mr. Barnes, who sells more stories than all the rest of the Service men combined, has just sold a story to the Atlantic Monthly and another one to the Saturday Evening Post. Mr. Gill has a fiction yarn in the current Hearst's International with another one scheduled for the December issue of the same magazine.

It has been suggested that part of the Atlantic Building be set aside as a branch of Greenich Village.

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Throwing the Diamond Hitch: Mr. Barnes and Mr. Rachford gave the Boy Scouts of Washington a demonstration of roping and packing a few days ago. Range appraisal reports were laid aside and old skill recovered by considerable practice before attempting to show the gentle art of throwing a diamond in front of a critical audience. The Scout Master says they maintained the best traditions of the National Association of Retired Cow-punchers except as to language.

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FOREST PRODUCTS LABORATORY

The First Newspaper: Although the first printing press in America was set up at Cambridge in 1638, it was not until 1704 that the first newspaper, "The Boston News Letter," appeared. This was a little sheet of two pages, each 9 by 12 inches. As a part of its latest news it carried dispatches from London that were almost five months old.

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Saving a Hardwood Waste: Twenty big charts showing by graphs and figures various facts learned about hardwood grades, cutting sizes, and consuming requirements were the subject of a lively discussion by a group of leading lumber manufacturers, distributors, and consumers assembled at the Laboratory during September.

The possibility of developing a system of grading hardwood lumber that will better serve the manufacturer and the consumer and at the same time conserve the log run product of the hardwood forest has been recognized for some time.

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Does Use of Paper Measure Progress? In 1920 Russia used six pounds of paper per capita, Japan 12 pounds, Germany 45 pounds, Great Britain 75 pounds, and the United States 150 pounds.

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DISTRICT 1 - NORTHERN DISTRICT

Fire Trespass Settlement: The Great Northern Railway has finally made offer of settlement in the amount of $7[illegible]6.94 for damages sustained by the United States on account of a fire which was started August 31, 192[illegible], on land adjacent to its railroad, on the Flathead National Forest near Rygate, Montana. This fire started in an accumulation of dead grass and brush on the right of way immediately after one of the company's trains had passed. Unburned or partly burned brush, debris, and old ties contributed to the spread of the fire.

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Mining Claims Canceled: District Forester Fred Morrell has just received a decision by the First Assistant Secretary of the Interior canceling a group of sixteen mining claims on the Coeur d'Alene National Forest in Idaho. The claims which the claimant called the "White Pine Group" embracing about 300 acres situated above Wallace contain a fine stand of white pine and other timber valued at about $25,000. The Forest Service contested the claims on the ground that no discovery of mineral had been made, that in fact the land was nonmineral in character, and that patent was sought solely for speculative purposes to obtain title to the valuable timber. A hearing before the United States Land Office at Coeur d'Alene, Idaho, resulted in a decision canceling fourteen of the claims and holding two of them to be valid. This decision was affirmed by the Commissioner of the General Land Office, but the decision by the First Assistant Secretary of the Interior fully sustains the position of the Forest Service and cancels all sixteen of the claims.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Service Reimbursed for Fighting Public Domain Fires: District 2 is just in receipt of $82[illegible].2[illegible] from the Land Office, reimbursement for fighting two fires, one near the Holy Cross and the other near the Routt, which occurred on public domain land entirely outside of National Forest boundaries. The claims were submitted to the Chief of Field Division in Denver and transmitted to Washington with recommendation that payment be made. Settlement was made in less than a month.

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Saving in Subscriptions for Periodicals: The District Library officers are glad to report a saving of $12.25 for the fiscal year 1925 on subscriptions to periodicals. This was done by asking for bids and giving the entire number of subscriptions to one magazine agency, the agency handling all the correspondence.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Cady Interests Acquire Flagstaff Lumber Company: According to "Lumber," the Flagstaff Lumber Company, which has extensive National Forest timber contracts on the Coconino, has been sold to the W. M. Cady Lumber Company. The Cady Company purchased the plant of the Apache Lumber Company at Cooley, Arizona, last year, made improvements in the mill and changed the name of Cooley to McNary. Cady has adopted the trade name "Arizona White Pine" for its product and is advertising it extensively in trade journals and other publications. The Flagstaff plant with its 70 M feet daily capacity will add another big institution to the Cady lumber mills.

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Nervine and Timber Famine: An article entitled "Grow Timber as a Farm Crop - Written for Dr. Miles Medical Company by the United States Forest Service," appears in the well-known Dr. Miles' Weather Almanac for 1924. The Washington office made a good hit when space in the almanac was secured for a conservation story. If, however, the significance of timber scarcity is realized, any article that tells the truth about the trend of forest depletion and the increased cost of living that is already here and is certain to be aggravated from year to year as the lumber haul becomes greater, can with propriety be placed close to advertisements and testimonials concerning remedies for shattered nerves and heart failure.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

The Black Hills Beetle Practicing Forestry on the Kaibab: During the past summer large scale control operations were conducted on the Kaibab National Forest against a very extensive outbreak of the Black Hills beetle. Within the past five years approximately 300,000,000 feet of timber have been destroyed by this insect. Part of these losses are scattered throughout the Forest, but the great majority is concentrated in two or three areas. Although only about 50 per cent of the infested trees has been treated, the results so far have been exceptionally good and demonstrated beyond question the possibility of controlling this insect by such methods.

However, a preliminary survey of the Forest has brought out a much more significant fact, namely, that this beetle has been present in this Forest, killing enormous quantities of timber, probably since the Forest has been in existence, although absolute records can only be dated back 400 years. The activities of these beetles have been almost continuous with probably intermittent periods of greater epidemiology. This has resulted in a rather unusual condition for a virgin yellow pine stand. Generally speaking, the Forest consists of a densely stocked immature stand. Stands of old mature timber are very limited in extent. Abundant rainfall and good soil conditions have also been a contributing factor. These beetles have in reality been putting into effect a form of management - cutting by a group system the annual increment of the forest for hundreds of years in the past and providing at the same time good conditions for reproduction. But a little study is needed to convince one that this system has been highly successful from the standpoint of producing rapid growth and fully stocked stands and possibly on a relatively short rotation period. Fires have also played a small part as local sorts of affairs. Usually starting from lightning, they burn up small areas of the bug-killed timber, at the same time killing the reproduction. With the seed trees gone and the reproduction that was previously established killed, aspen rapidly comes in and converts such burns into an aspen type. There is an excellent lesson here for foresters and one that should receive thorough investigation.

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Can You Beat This? Some time ago Ranger Howard of the Manti reported aspen trees measured in Mill Canyon that were 69 feet to the first limbs. Recently in measuring an aspen tree in Rildy Canyon he found one tree 106 feet high and 89 feet to the first limbs. Not having received any challenge to the first measurements we printed, it is a fairly safe bet that there are but few places where taller aspen can be found than those measured by Ranger Howard.

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DISTRICT 5 - CALIFORNIA DISTRICT

$1,000,000 Spent in California Auto Camps: More than a million dollars were spent last summer by 1,235,000 auto tourists for camping privileges and supplies in public camp grounds in California, according to the biennial report of the State Board of Health just issued. According to the health board more than 3,000,000 persons visited the National Forests of the State during the summer months.

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Pride Cometh Before a Sting: Supervisor B. H. Mace of the Trinity, so the story goes, while riding along a secluded forest trail recently, was industriously adding new luster to his midget F. S. Badge, with which he awes the denizens of Trinity County, by rubbing said emblem of authority on his new $15 uniform breeches; when suddenly the pine-tree shield flew out of his hand and fell in the dust.

Laboriously dismounting from his trusty steed, Benjamin H. reached out and picked up the shimmering bauble, only, with a cry of pain, to cast it from him far down the brush-covered mountainside. The reason for this extraordinary and hasty action, it seems, was the fact that his ungloved hand had unwittingly intercepted the wandering flight of a peppy yellow jacket, also shieldward bound, who registered his disapproval by swift and energetic action. Mace's horse, it is said, also got quite a "kick" out of the proceedings that followed. Later, when the dust and excitement had settled, timely and diligent search was made for the last badge, but without success.

Due to the extenuating circumstances surrounding the case, the Supervisor has been relieved of the lost property. But it is hoped that the all-too-plain moral of this painful lesson will be taken well to heart by all Forest officers.

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No Smoking: The Southern Sierras Power Company has forbidden its employees to smoke or light matches while at work in the field, where brush, undergrowth, or other conditions render a hazard from forest fires.

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DISTRICT 6 :- NORTH PACIFIC DISTRICT

He Likes It: A postscript on the bottom of a Siuslaw Ranger's fire trespass report states: "He gave me a free ride from his place on North Fork to Mapleton, bought my dinner, fed me on ice cream, soda pop and grapes and took me on home to Florence. In other words no hard feelings at all. It is a pleasure to arrest such men!"

This man pleaded guilty to burning slash without a permit and was fined $10 and costs.

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On Recreation Committee: Assistant District Forester Guthrie has been recently made a member of the Outdoor Recreation Committee of the Portland Chamber of Commerce.

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All Set: A young man recently applied for work on the Mt. Baker Forest. "Have you ever done any woods work?" inquired the Supervisor. "Yes, indeed," replied the applicant, "I have fished quite a bit."--R.L.C.

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DISTRICT 7 - EASTERN DISTRICT

The Melancholy Days: They are with us again! All around the leaves are sifting down through the haze of Indian Summer. "They rustle to the eddying gust" and mayhap to the fire bug's tread, 'n everything. June has her days, but these fall days in the Southern Appalachians are truly pleasant even if they are harbingers of the dangerous days to come. It is a time for all of us to get all pepped up - a time to put in the last licks in preparation for the troublesome fall fire season - troublesome in large part because of these autumn leaves and scurrying winds that the poets say so much about.

We are better prepared this fall than ever before to handle a difficult fire situation - better equipped and better organized, and every possible effort should be put forth to hold our losses to the minimum. The White Mountain Forest had a successful year - it is a habit with them up there - and to date the Southern Appalachian group has lost less than three-tenths of one per cent of National Forest land (the ten-year average is .86 of one per cent) and the Arkansas losses are the lowest in the history of the Forest. The Ozark, with a baffling, difficult problem, is making progress, and even the Wichita has a lookout perched on the top of the world. (He is entirely inside the Forest, too, though Shanklin was for a time a little worried as to whether the Forest would hold 200 bison and a full grown lookout.) The Florida is holding her own, and with additional funds (next year, we hope), we are going to be able to get the upper hand down there.

Now that Washington has won a pennant and a World Series, it would seem that nothing is impossible, so let's get the jump on this fall fire season and round out the calendar year 1924 with the best year we have ever had.--H.O.S.

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

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Henry C. Wallace

Secretary of Agriculture

March 4, 1921 - October 25, 1924

HENRY C. WALLACE - LEADER AND FRIEND

By W. B. Greeley

The Forest Service has lost a great leader and a sympathetic friend in the death of Secretary Henry C. Wallace. Secretary Wallace came to the Department with a deep interest in national conservation, created by his own study of the land problems of the country and by his intimate contact with Governor Pinchot and other leaders in the earlier phases of the movement.

No Secretary of Agriculture has ever had a more complete grasp of the fundamental things which the National Forests seek to accomplish or of the need for a more complete national forestry policy. Nor has any Secretary had a more sympathetic fellow feeling for his associates in the Government work and for their personal needs and interests.

He never lost the hearty, comradely feeling of the man who is bred from the soil and thoroughly understands and shares the viewpoint and aspirations of the plain people. It was always a pleasure for me to take up with him the personal problems and interests of the people in the Forest Service because of his quick and sympathetic understanding of the affairs of everyday life. And there was no more delightful experience than to accompany Secretary Wallace in the field, where he was just as much at home in eating a meal at a ranger station, in talking with a forest guard, or in meeting settlers and stockmen, as he was in mingling with the dignitaries and potentates of the land. Secretary Wallace always had a keen zest for the simple pleasures and everyday interests common to us all, whether it was a fishing expedition, a trip over a National Forest, or a horseshoe pitching contest. And he carried this same broad sympathy and understanding through all of his official duties. Those of us who had the privilege of close association with him will always think of him first as a personal friend.

Secretary Wallace's years as head of the Department of Agriculture were marked by noteworthy accomplishments in national forestry, and in all of them he took an active part. To his persistent and determined efforts was largely due the failure of the attempts to take the National Forests out of the Department of Agriculture and to break up the conservation program in Alaska. He was keenly interested in all of the steps which led to the enactment of the Clarke-McNary forestry law. He not only supported this program in his speeches and reports but appeared personally before the special committee of the United States Senate and gave an extended resume of the whole situation with his own recommendations, upon which the new legislation was very largely drafted. He took a leading part in the work of the National Forest Reservation Commission and the Federal Power Commission, the latter particularly at a time when his influence was of special value in making the Federal water power policy live and effective.

None of these official duties were discharged by the Secretary perfunctorily. I was often amazed at the way in which, amid the multitudinous and complex demands upon him, with the whole agricultural situation of the country resting upon his shoulders, he would take up some phase of pending work dealing with National Forest administration, or forestry in general, or range management, go to the bottom of it, and put his own personality into its solution. In all of these activities and amid all the conflicting influences and appeals to which he was subjected, he showed remarkable sanity and common sense. He was essentially a builder with a constructive viewpoint on every problem that came before him; but his building was sure and permanent because of his practical grasp of actual conditions and his understanding of the best ways for getting things done.

Nothing has ever inspired me more than the faith which Secretary Wallace so constantly showed and expressed in the aims and ideals of the Forest Service and the confidence which he imposed in the Service as an organization of men and women. Time and again I left his company with a keen sense of the trust which he placed in us no less than the wonderful backing which he was giving to our efforts.

This is the message that, as we respect and cherish his memory, I would like to extend to all of my fellow workers in the Service. Our leader and friend is gone, but his inspiration and his work remain. The best possible commemoration of Secretary Wallace will be for us who carry on to live up to the faith which he had in what we are trying to do and to his trust in our ability and loyalty to accomplish it.

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DISTRICT 1 - NORTHERN DISTRICT

A New One: Last summer Lookouts on the Kootenai Forest reported a little smoke. With all the gusto of reducing elapsed time, Ranger and Smoke chaser rushed to the scene. They found the fire to be in a bunch of slash in the middle of a homestead clearing. The rancher met the Forest officers with something like the following: "Well, well, you finally did come, did you? Where have you been? We have had this fire here for a week, and my son and I had an awful hard time corralling it. We just did catch it. Just look at the fine fire line we built." Sure enough, there was a most excellent fire line around the fire, and the fire was completely under control.

One would think that the Supervisor and Ranger would be dumbfounded over the ineffectiveness of the lookout system, but every evidence indicates that the fire line was constructed first and then the fire applied within it, though there is not sufficient evidence to make it a court case. As permits are required, this rancher apparently planned on getting away without one, and incidentally hanging it on the Ranger in addition to other misery he has been dealing him. Last reports make no mention of the rancher applying for payment of labor of himself and son on the fire. That would support the conclusion that the fire was not a week old, but was spotted immediately upon its incipiency.

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Intending Visitors - Take Notice: A brand new club - as yet unnamed - of all Forest Service women in Missoula is a recent achievement which it is hoped will be of as much interest to girls on the Forests as it is to us here. Organized for the primary purpose of getting together for a social hour, this club promises much in the way of entertainment and amusement for the coming months. It is expected and cordially requested that all Forest Service girls from the field visiting in Missoula will get in touch with Mrs. Walker in Accounts, our chairman, and, through her, with our organization, which will eagerly welcome every opportunity of knowing better the field members of our official family.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Seed Crop in D-2: Reports from Forest officers indicate that the crop of forest tree seed this year is very meager throughout the District except on a few Forests. The Black Hills has a bumper crop of yellow pine seed, and several Colorado Forests report good crops of Douglas fir and Engelmann spruce. The Norway pine seed crop is very scant, as usual. There has been a big demand for Norway pine seed during the past few years from State and private organizations to raise stock for forest planting, and the lack of seed has retarded forest planting in the Lake States and the East. A recent seed catalogue from Thomas J. Lane, Dresher, Pa., gives a quotation of $22.50 a pound for Norway seed. In addition to the Forest Service, the State of Minnesota, the University, and several private collectors are gathering cones in the vicinity of the Minnesota Forest. Wm. T. Cox, former State Forester of Minnesota, and now a consulting forester, seed dealer, etc., is attempting to make a big collection, and is negotiating for the use of the Cass Lake Seed Extractory on a cooperative basis. He also expects to extract some cones at the Cloquet Experiment Station. At the price quoted above, it should be quite profitable to collect Norway pine seed even though the crop is very small.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Offers to Herd Kaibab Deer Across the Grand Canyon: The Coconino Sun of Flagstaff recently ran a story in which it was stated that George McCormick of Flagstaff has offered to gather the surplus deer on the Kaibab National Game Preserve north of the Grand Canyon and bring them across the Colorado River for $2.50 per head. Mr. McCormick is well acquainted with the country and believes the scheme is entirely feasible. He does not think the deer, which have never been hunted and are quite tame, will be any harder to handle than wild range cattle. If the thing can be done it looks like the real solution to the perplexing problem of what to do with the twelve to fifteen thousand surplus deer which it appears must be disposed of in order to prevent destruction of the whole herd through starvation. Deer released in the Tusayan Forest after the hunting season would have time to scatter all over the Coconino, Sitgreaves, and Prescott Forests, and possibly the Apache Forest and Indian Reservation, before another hunting season. If the surplus can be moved that way now, future surpluses can, of course, be handled similarly so that the Kaibab could be a continued source of supply for restocking of Arizona hunting grounds.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Tom Mixes with Bryce Canyon: It is reported by Geo. Nichols, who has returned from southern Utah, that Tom Mix has recently filmed a movie at Bryce Canyon in which he rides a horse out on some of the narrow ridges where a sane man would not go on foot, and does some foolhardy jumps among the rocks and crags of the chasm.

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Undeveloped Resources: The strenuous forest fire season this year, especially that in California, brought to light a resource in the Forest Service that has remained relatively undeveloped - poetry. Have you noted how many of the "poems" ground out by Forest Service people deal with fire and the thrilling hardships encountered in fighting them? This is food for thought. The output of poetry in the Forest Service ought to be at least tripled if we did all work with as much intensity as we do fire fighting. Why shouldn't the range reconnaissance men sleep on a bedground with the sheep some night and go forth with them in the morning tasting the succulent herbage? They ought to learn what a sheep's life really means in this way and tell it to the world in passionate song. Why should not the Ranger learn the life of a beaver by gnawing down an aspen or two with his own teeth? Why not put more of the real stuff into everything we do and reap vast returns in delicate verse?

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DISTRICT 5 - CALIFORNIA DISTRICT

Fire One Year Old Still Burning: A great deal has been written this season about fires, but I want to tell about a fire that is not a product of this season. It is one that started on September 1, 1923, and you may be surprised to know that it is still burning; and you may also wonder why we don't put it out. You may consider it poor business on the part of the Santa Barbara to allow its fires to burn that long, but we consider this job a little too big for us. It is not burning in brush nor in timber covered areas, but is burning different mountains along the Santa Ynez range.

The oil shale got on fire when the main fire went through the country, and a great many of the high cliffs along the Santa Ynez River have been reported burning ever since. Last week while Ranger Dunne was camped near Mono Flats he heard a funny crackling on the side of the mountain; he looked up and saw some Buckwheat ignited where the fire broke through from one of these oil shale burns, and if it had not been that this area was well burned over last summer we should surely have had another forest fire.

This fire was originally fought for five weeks and burned over 50,000 acres.--C.E.J.

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Hot Off the Wire: San Francisco lady 'phoning Forest officer: "I want to put in an application for two of the deer in the Kaibab Game Preserve, that the Government is advertising to be given away free."

Forest officer: "Better write to the Department of Agriculture at Washington."

S. F. Lady: "Do you suppose they'll act on it before the deer are all dead?"

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DISTRICT 6 - NORTH PACIFIC DISTRICT

D-6 Press Bulletins: More people can be reached through the newspapers than in any other way. Judging by clippings received, D-6 press bulletins are getting over to the newspaper editors of Oregon and Washington, they must be or else they would not be used. The following table showing classification of our press releases for the last three years is of interest:

Item Relating to:-	F.Y. 1924	F.Y. 1923	F.Y. 1922
Operation (Fire Prevention, Personnel, etc.)	33	22	19
Forest Management (Sales, etc.)	8	11	4
Lands (Exchange-Boundaries)	6	3	7
Grazing (and Game)	5	2	3
Engineering (Roads)	0	3	2
Products	4	10	5
Fiscal Agent (Receipts-Roads and Schools)	6	5	3
Public Relations (Motion Pictures, Exhibits, etc.)	7	6	5
Research	4	2	5
National Forest Policy	13	14	8
Alaska	1	1	1
	87	79	62

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DISTRICT 7 - EASTERN DISTRICT

Some Excellent PR Work: As the result of an address by Forest Supervisor Mattoon of the Cherokee before the recently organized Federal Business Association of Knoxville, Tennessee, the Chief of Staff of the 81st Division of the U. S. Army has agreed to distribute our fire prevention material through an official monthly magazine to 80,000 officers of the Army Reserve Corps. The physician in charge of the U. S. trachoma hospital will distribute similar material on his rural and mountain mailing list in the east Tennessee section, and the pension officer will similarly use his mailing list of pensioners. Closer cooperation with the weather forecaster is another immediate result of this public appearance of the Supervisor.

Supervisor Bishop of the Allegheny has again broken into the lecture field with a talk before the Sheffield Rod and Gun Club on October 7, in which the approaching fall fire season received all due emphasis.

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Article on the Pisgah: The October issue of the American Motorist carries an excellent illustrated article on Pisgah National Forest written by R. C. Shelse from material furnished by the District office.

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New Tower on the Allegheny: The Kinzua lookout tower and cabin on the Allegheny National Forest is near completion. This improvement is one of the "thirty-foot steel tower living quarters on top" type. Since the tower will constitute quite a general benefit, it has been possible to secure quite a little in the way of cooperation. The Central Pennsylvania Lumber Company is furnishing all the necessary lumber. It is estimated that their contribution amounts to about $250. The American Plate Glass Company has made it possible to glaze the cabin with plate glass by contributing the necessary panes. The value of their contribution is approximately $150. The Pennsylvania Gas Company is contributing $100 in cash, as is the Kinzua Valley Chemical Company. Other contributions are the Pennsylvania Department of Forests and Waters services, $25, M. W. Jamieson, $25, Pickett Hardware Company, $25.

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

Vol. VIII, No. 45. Washington, D. C. November 10, 1924.

THE GOOD BUSINESS OF FIRE PREVENTION

By N. F. Macduff, Cascade

In 1923 the Central Pacific Railroad Company announced its intention of completing the so-called Natron Cut-off in Oregon. This cut-off started at Eugene in the Willamette Valley and cut through the Cascade Mountains, connecting with the Central Pacific line at Klamath Falls. Construction on this had begun in 1910, but in the Harriman and Hill fights of that day was stopped in 1912.

The route for this line crosses the southern part of the Cascade National Forest along Salt Creek. Construction work began again in February, 1924. The right of way had to be cleared for fire protection and protection of track and bridges for widths from 50 to 400 feet. Settlement for timber to be cut was required on the basis of a 100 per cent cruise. During the spring brush burning was carried on without the necessity for special precautions. Having 38 miles to clear through timber, much of which averaged 50 thousand feet per acre or better, it was early apparent that burning of brush and debris would have to continue through the fire season if construction of the grade was not to be delayed. The District Forester consented to summer burning only on condition that water was instantly and constantly available where burning was being done.

Here is the way District Ranger J. F. Campbell handled it:

The railroad company, or its contractors, was required to employ a firewarden acceptable to the Forest Service in each camp, these men to have no other duties than fire prevention.

The company was required to furnish a hygrothermograph (relative humidity machine) and to deposit into a cooperative fund the salary and expenses of a chief firewarden selected and directed by Mr. Campbell and responsible to him. The chief firewarden had supervision over all camp firewardens. Wherever burning was to be done on the right of way, a portable gasoline fire engine was installed with 1200 feet of hose. Fire lines 20 feet wide to mineral soil on the edges of the right of way were cleared. Brush was cut, piled, and burned and fires put out with water. Trees were felled next - limbs piled and burned and fires put out with water. Merchantable logs were then skidded or dragged into piles on the edge of the right of way. Unmerchantable logs were shattered with powder, burned, and fires put out with water. Whenever the Weather Bureau forecast a period of dangerous fire weather, all fires, except in camp cookstoves, were put out with water, and no new ones lighted until the danger period passed.

As summer progressed and dryness of vegetation increased, burning was permitted only at night and all fires were put out with water by 9.00 a. m. In addition to Weather Bureau forecasts, close watch was kept on relative humidity record of the hygrothermograph, and whenever the morning reading was 75 per cent or less all fires were put out with water. Such close attention was paid to relative humidity readings by Mr. Campbell and Chief Firewarden Foster Steele (formerly of the Forest Service), that the workmen would anxiously inquire, "Well, how is our relative, Mr. Humidity, this morning?" - particularly on Saturdays, because on Sundays they wished to build fires to do their week's washing.

On parts of the right of way where water could not be made available with the gasoline fire engines, no burning was permitted and special patrolmen were required to be employed by the company. Patrolmen were equipped with back-pack water bags and hand-spray pumps, hazel hoes and axes. Fire lines were cleared to mineral soil on each edge. So far (September 20) only one fire has escaped from the right of way burning and it burned over only one and one-half acres.

This experience, with the similar experience on the Mount Hood National Forest last summer on the Portland Railway Light & Power Company's Oakgrove transmission line project, certainly demonstrates that burning may be done safely during the fire season if three factors are present; namely, hygrothermograph, water, and common sense or good judgment by Forest officers in the use of the relative humidity record and water.

The cost to the railroad company for fire prevention precautions has been close to $1,000 per mile. However, these precautions have protected two billion feet of timber, twenty-five hundred railroad workers, and thousands of dollars worth of construction equipment. It would not have been safe to burn without these precautions; hence, without them construction would have been delayed six months. With an annual investment in the new road of ten to fifteen million dollars - idle until the road is in operation - the daily interest charge at six per cent is from one thousand seven hundred to two thousand four hundred dollars. Hence the railroad company could well afford to spend some thirty thousand dollars for fire prevention, rather than be delayed two or three months, or run the risk of losing many times that value in timber tonnage, construction equipment, or human life.

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LOW WATER BRIDGES DOWN IN ALABAM'

By B. M. Lufburrow, Alabama

Rhoades' article on low water bridges in the SERVICE BULLETIN of October 13 interests us greatly on the Alabama, where we have recently rebuilt one structure of this kind and are planning to build two more in the near future.

Our conditions are very similar to those of Caldwell County, North Carolina, as described by Rhoades, and the low pressure bridges have proved very satisfactory where insufficient funds prohibited construction of the high water type of bridge. On the Alabama and south in the hilly country the height of the bridge above the normal height of the stream is usually 8 feet instead of 8 inches as in North Carolina. We believe that the difference in height will allow the use of the bridge more quickly after a freshet than the lower structure. In August, 1922, a bridge of this type was constructed by Ranger McDowell over Sipsey River. The cost of the bridge was only $385. Its length was 80 feet. This was a replacement bridge, the old one having been washed out during a freshet, after being in use for twelve years with no maintenance during its last five years.

The timbers for the bridge were hewn near the site, thus saving cost of hauling. The cap sills were 10" x 12" x 13', and these were fastened to the mud sills, which in turn were fastened to bedrock by means of a 2-inch iron rod wedged in the rock. The stringers at the piers were braced by 10" x 10" x 18' braces, which also were fastened to the mud sills in the same manner as the cap sills. Similar braces were placed on the upstream side of the bridge, but these serve to keep the bridge clear of logs and drifts more than as an anchor.

This bridge has withstood several freshets and in one case the water was twelve feet over the bridge. It only took 24 hours for the water to fall so that traffic could pass over the structure. Had the bridge been only 8 or 10 inches over the normal depth of the stream, it could not have been used for two weeks. There has been no maintenance since the bridge was constructed, and it is doubtful whether there will be any within the next two years. Our experience has been that these low pressure bridges are a very satisfactory type of structure under the conditions set forth in this article and by Rhoades.

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GOOD SADDLE HORSES OR GOOD CARS

By R. M. Kingsley, Helena

In the early days, the District Ranger was regarded largely as a guardian of the forests. As such he traveled exclusively by saddle horse and had his headquarters high in the hills. Of late he is regarded as the manager of a business, he travels more and more by car, and his headquarters now can usually be found in some small town or settlement where he can be of more service to the people of the locality.

In these present days when the District Ranger is being given more and more new activities to handle, besides still handling all the old ones, it becomes increasingly essential that he cut down what was once called "job-to-job travel." There are many trips that can be taken as well and much more quickly by car than by horse. I doubt, however, that there are very many Ranger districts where the old "bunch-grass roadster" can be entirely eliminated without the loss of some efficiency, more particularly in range management, grazing studies, salting plans, etc.

Where the use of a car will facilitate the business of the Government, it should be used, and should be Government owned. On the contrary, where a saddle horse can be used more effectively in the work of the Service this means of travel should be followed. Saddle horses should not be Government owned.

This matter can be carried to extremes either way, and no hard and fast rule will apply to all Ranger districts. It would seem to be a matter for the Ranger and Supervisor to settle, and where practicable both a saddle horse and a car should be used.

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THE RANGER'S PRAYER

By H. R. Elliott, Malheur

Oh Lord in Heaven, hear our plea! Give us high humidity;
Spare us trouble, work and pain, send us stormy skies and rain!
Teach the folks these summer days "Prevent Forest Fires - It Pays";
Keep the lightning from our pines, keep the sheepman in his lines;
Make the cowman know his fault when he fails to put out salt!
Teach the timberman to blush when he fails to pile his brush;
Make us wise to understand these new Manuals at hand;
Make our Supervisor wise, hide our boneheads from his eyes;
Hear this our meek request and then we'll do our very best;
Amen!

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WASHINGTON NOTES

This May Be a Joke on the Service: Speaking of tailor-made cigarettes, some day when you are approaching the Atlantic Building from the west - the side nearest the center of the city - take a look at the big sign adorning the uppermost corner of our habitation. If you do you will see painted in vivid colors a big advertisement extolling the virtues of CAMEL CIGARETTES! Why not change this to -

PREVENT FOREST FIRES - IT PAYS

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Nothing from Nothing Leaves Nothing: A recent telegram received by Mr. Headley begins "In re zero fire trespass." Zero is the latest designation, unofficial, for the Branch of Operation.

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Bugs: Dr. Craighead of the Bureau of Entomology recently read the annual insect situation report from one of the western Districts and in commenting on it said:

"I note that in several cases minor bark beetle outbreaks are being handled by timber sales. We (the Bureau of Entomology) are more and more coming to the opinion that such methods are highly satisfactory and should be encouraged wherever possible."

What about getting that lightning-struck tree, which was attacked by several million bugs last August, cut, hauled out, and used this winter by some free user? Remember that it can be given away to anyone under the Administrative Use Regulation if you cannot get it cut by a qualified free use permittee.

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FOREST PRODUCTS LABORATORY

Pulp and Paper Committee Much Interested in Laboratory Work: That a visit to the Laboratory is the best method of getting folks acquainted with our work seems to be the conclusion of the pulp and paper committee which visited the Laboratory recently. One result of the meeting will probably be a visit of a larger group of pulp and paper people some time within a year. These visitors are the members of the subcommittee for the Laboratory of the Advisory Committee of the Pulp and Paper Industry to the Department of Agriculture.

Mr. Collins of the committee declared that had he known of our boxing and crating work his organization could have been saved much time and money. He and other members of the committee seemed very much impressed with the extent and character of laboratory research.

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Much Interest in Forest Products Conference: Great interest is being manifested in the National Conference on Utilization of Forest Products according to letters received by Acting Secretary of Agriculture, Howard M. Gore.

Present indications are that there will be assembled at this meeting more influential people representing the producers, manufacturers, distributors, and users of wood than have ever gathered at any one occasion.

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DISTRICT 1 - NORTHERN DISTRICT

Fairs Prove Drawing Cards: According to official figures, over 180,000 people attended the three fairs at which the Department exhibit was shown this year in District 1. The Forest Service section of this exhibit was prepared in District 5 and comprised a booth showing an automobile camp on the shore of a lake. Before a painted background a small artificial camp fire, lighted from beneath by a red lamp whose silk flames were kept in motion by a fan, did continuous duty beneath a tiny coffeepot. Figures cast in lead lent realism to a rustic camp table on which were spread miniature tin dishes. Standing a short distance away it was difficult to tell where foreground merged into background, such was the excellence of the painting and models. It is felt that this was one of the most successful exhibits shown in this District so far.

The fairs attended were at Spokane, Lewiston, Idaho, and Billings.

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Slash Disposal Experiments: The Bonners Ferry Lumber Company operating on the Kootenai has left the usual bad slash area on about 1000 acres of its own land. First, considering the requirements of the State fire law, secondly, in order to carry out an experiment in slash disposal, thirdly, to reduce the danger of fire spreading, and further, in consideration of the unnecessary destruction which would occur to the remaining unlogged timber if the area were broadcast burned, it has authorized the Supervisor to spend the sum of $750 to pile and burn in strips along the roads and skid roads. Apparently, a material reason is its desire to keep the land productive. Occasional instances like this are indicative of the slow and positive growth in favorable sentiment toward the proper handling of timber lands by private owners.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Nebraska School Land Exchange Completed: By the approval on August 15, 1924, of indemnity list No. 7, the State of Nebraska surrendered all of its school lands in place within the Nebraska National Forest, and received in exchange for them two compact blocks of National Forest land. The exchange involved 8960 acres on each side and was in pursuance of a written agreement between the Secretary of Agriculture and Governor McKelvie, dated August 14, 1919. Previously, however, in 1917 the State legislature had authorized that the exchange be made, and all field examinations were completed before the final agreement was entered into.

Some of the State lands were encumbered with long-time grazing leases upon terms considerably more favorable to the lessees than could be obtained under Forest Service permit, and a large part of the delay in completing the exchange was occasioned by the satisfactory disposal of these leases so as to clear up the titles. Privileges of equivalent value offered by the Service finally were accepted by the lessees and their leases were surrendered for cancellation.

The State's purpose in participating in the exchange was to facilitate administration of its lands and increase their value. Proposals for their use in planting a State forest also were considered, but no definite provisions to this end have yet been made. From the Forest Service standpoint the exchange makes a very desirable consolidation of the Forest for administration and planting purposes.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Lumber Quality and Location or "Putting it Over in the West": "When it comes to making quality lumber," says the W. M. Cady Lumber Company of McNary, Arizona, in a full page advertisement entitled "Putting it Over in the West," which appeared in a recent American Lumberman, "The mere question of location is of no particular consequence provided that you have good timber and competent employees." The W. M. Cady Lumber Company purchased the entire outfit of the Apache Lumber Company not long ago and changed the name of the mill town from Cooley, Arizona, to McNary. The new company, which is new only to the Southwest because the Cady Lumber Company has made itself famous through its big manufacturing plant at McNary, La., is making changes and improvements in both mill and town. "Both of these important factors (good timber and competent employees) have been provided at our new operation," continued the ad. "Our immense stand of Arizona white pine timber will keep our three band mill in operation for the next forty years." "Cady quality

Arizona white pine" is the trade name the company has given the product of the Arizona mill and the western yellow pine on the Sitgreaves is a large part of the reservoir from which the "Arizona White Pine" will have to come during the forty years of continuous operation.

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Wind Damage on the Lincoln: The latest information received from the Lincoln regarding the blowdown on the Sacramento Mountains is brought out in the following figures:

Owner	Area	Per cent blow-down	Vol. M Ft.
Southwest Lumber Company	3072	50	30,720
Private	120	50	1,200
National Forest	1280	50	9,600
Total	4472		41,520

Assigning a value of $2 per M feet, this amounts to $84,000. Six hundred thousand feet lie within an existing sale area, and will be logged. Much of the rest of the timber is so situated that there is small chance of being able to salvage it in advance of the next fire season. The figures attempt to cover only the worst area. It is stated that damage extends practically across the Sacramento Division from north to south in a comparatively narrow strip along the summit. Areas are being appraised and advertised, and every effort is being made to salvage the material. Most of it will have to be handled as cordwood.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

On October 1 the committee appointed by the Secretary of Agriculture to investigate the deer situation on the Kaibab submitted its unanimous report. The committee reported the following findings: That the deer, including even many of the young bucks, were extremely thin and many of the does with fawns were in a deplorable condition; that the increase is approximately 50 per cent of the total herd; that there are at least 26,000 deer in the preserve; that the conditions of forage throughout the preserve are deplorable and that the arbitrary removal of all livestock would not be warranted.

The committee recommended briefly as follows: That no new grazing permits be issued or existing permits be increased; that no reduction of less than 50 per cent of the existing deer herd would be effective; that as the first measure in reducing the herd, live deer be distributed for restocking upon payment of expenses incident to capture, crating, and transportation, and that if this method fails the preserve be opened to hunting under careful regulations or the necessary reduction be made by Government hunters as the last resort.

The Secretary of Agriculture has issued the necessary regulations to permit of both the distribution of live deer and the killing. The initial steps in the capture of the deer have been taken but the process is rather slow. A few animals have been captured but these are mostly bucks. However, additional facilities have been arranged for which it is believed will expedite the work.

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DISTRICT 5 - CALIFORNIA DISTRICT

Fire Board of Review Starts Work: The Board of Review appointed to investigate the 1924 National Forest fire record, in order to determine how we can profit by the lessons and experiences of the past season, started work on the Shasta Forest October 21. Later, the board will visit the Plumas, Tahoe, Sierra, and Angeles National Forests. Members of the Board of Review are District Forester Paul G. Redington, Inspector Evan W. Kelley of the Washington office, Assistant District Forester R. L. Deering, District Inspector E. I. Kotok, S. B. Show, Silviculturist, and Logging Engineer J. H. Price.

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How It Happens: (From a recent confession secured by Forest officers): "About 11.30 a. m. I was sitting on a block of wood that I had cut off from a tree, eating my lunch. I was alone. I finished my lunch and lit my pipe. The wind was blowing very strong at the time. There were leaves all about. While trying to get the pipe going the match burned up into my fingers and I dropped it. A fire started instantly. In less than a second it was all around. I didn't have a shovel and couldn't stop it. I started and got a stick and tried to work around it. Also got a sack and tried to stop the fire. Shortly after it started Lester came with another man and the three of us with shovels couldn't put it out. After awhile the Forest Service crew came."

It cost Uncle Sam $2,992.28 to suppress; burned over 700 acres of cut-over and timberland; and destroyed 2,000,000 feet of timber, with every vestige of reproduction.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Introducing Pondosa Pine: The Western PineManufacturers' Association, with headquarters in Portland, has decided officially to adopt the name Pondosa Pine (*Pinus ponderosa*) to characterize hereafter the lumber sold under the various names of western white pine, eastern Oregon pine, Sumpter Valley pine, western soft pine, and similar local nomenclatures. In eastern British Columbia the wood is sometimes known as British Columbia white pine. The jurisdiction of the Western Pine Manufacturers' Association embraces western Montana, Idaho, eastern Oregon, and eastern Washington.

The reason for the change was an attempt to harmonize under one name the product of various groups, which in some cases are manufacturers of both Idaho white pine (*Pinus monticola*) and Pondosa Pine (*Pinus ponderosa*), so there would be a clear and distinguishing designation for these two species. An advertising campaign will supplement the adoption of this new trade name.

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DISTRICT 7 - EASTERN DISTRICT

Speaking of Cooperation! On Saturday, October 25, at 10 p. m., a per diem guard on the Alabama discovered a fire. Starting immediately for it, he met another man who was on his way to report the same fire to a Forest officer. Both returned to the fire and by quick work only one acre was burned over. At this time no rain had fallen on the Alabama since September 2. All streams and most of the wells and springs of the country had gone dry, the entire country was covered with a coat of dust about an inch thick, and the fire hazard was the most severe ever experienced since the establishment of the Forest. Only through such cooperation was it possible to keep down the losses.

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A Class of 29 Candidates appeared for the Forest Ranger examination at Hot Springs, Arkansas, on October 25. This is by far the greatest number ever to enter the examination on the Arkansas and is doubtless somewhat indicative of the awakening interest in forestry throughout the State.

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Service Bulletin
U. S. FOREST SERVICE
(Contents Confidential)

Vol. VIII, No. 46. Washington, D. C. November 17, 1924.

OLD DOBBIN AIN'T EVEN SICK

By E. L. Bennett, Washakie

A frog was born, lived all his life, and died in the bottom of a deep well. To him the world was a long, dark tube with water in one end and a light spot at the other end. Judging by Webster's article in the SERVICE BULLETIN of September 29 there are points of resemblance between that frog and the two Forest officers with whom he argued the horse question.

Some Forests, possibly including the Pike, have road systems sufficiently elaborate to enable one to reach almost all parts of the Forest in a car or, at least, by using a car, get to all places where Forest users are found. But, just as the frog's idea of the world overlooked a few points, so does an idea based on such Forests fail to apply to all. On the other end of the scale - take an example from my present well - is the Washakie. Here, one can skirt the edge and make small inroads at a few, very few, points. A pedestrian trip from a car to even the medium remote points where Forest users are to be found would require that one take his choice between packing a heavy bed and living off the country - walking a grub line - or packing grub and sleeping, if any, on the country. Under conditions found here one would not be long in crying "A horse, a horse, my flivver for a couple of horses."

Webster's opponents argue that a horse can make only three miles an hour. That shows that either their horses or their trails are exceptionally good - two and a half is a better average for the country I have known, on four Forests. It is admitted that a car goes faster, but why the hurry? I have noticed that the faster I drive the less I see of the country I am driving through. A car at twenty and up keeps one's eyes on the road or, on mountain roads, puts one in the ditch, but, Dobbin, at two, looks out for his own route and leaves one's eyes and thoughts free of traffic problems. This freedom encourages observation and consideration of the things observed, important points in the life of a Forest officer, who is supposed to know every inch of his district and have a pretty definite idea of the present condition of all of those inches.

In the Administrative section of the Manual under "Good Practice" we find this: "To give preference, when in doubt, to horse transportation as against automobile transportation * * *" and "To make trips when time permits, into regions which do not have to be visited on regular business." Under "Bad Practice" we find: "To neglect to make systematic trips for the purpose of becoming familiar with parts of the district in which no business ordinarily ~~to~~ be handled." This disposes of the argument "for what other reasons than to see the Forest users and inspect timber sales and such did a Forest officer travel?"

That "and such" is good. In two words are stated all the duties of a Forest officer not included under seeing Forest users and inspecting timber sales. To be qualified to run a ranger district one has to know how to visit, how to inspect a timber sale, and such. Where did some of us get the idea that we had Lands, Operation, and Grazing? Have Forest Management and PR put them in the discard?

For years we have heard about progressive travel and have spent time, thought, effort, and money on systems of trails that would eliminate back-tracking as much as possible. Following roads is not usually progressive travel and it leads to a lot of back-tracking. While, on Dobbin, you have usually seen the country you passed through, I'll admit that you can find a lot of new things when you back-track if you made the going trip in a car.

Grazing work presents other problems. Can one cover enough high sheep range in a car or afoot for a car to give one a good idea of how all the range is making it? Are all the cows sufficiently familiar with the sight of a man on foot to permit one to give them a good inspection? Don't any of the bulls ever get on the fight any more? Can one get close enough to trespassing stock to get the brands? Not yet, as the boy answered when asked if his father was alive yet.

Arguing that a Forest officer without a car is as inefficient as he would be without legs is good, too. Where do heads come in? The men on the Alaska Forests might ask the Pike where it keeps its ocean-going boats.

Inspectors from D.O. and the Washington office see conditions on all the Forests and, so far, I have not heard of any appreciable number of them making recommendations that we trade all our horses for cars. On the other hand, when asking for automobile authorization a Ranger has to put up a pretty good argument and show pretty definitely that the car will effect a saving of time and help to get enough more work done to justify the expenditures for car and mileage. If the car is so dog-gone much more efficient than the horse why is it that Uncle Sam feeds the horses but refuses to pay all the operating cost of the car? "There's a reason." After using a car three years in a country that is about average of all the National Forest territory I have seen, I came to the conclusion that it was not a paying proposition either for me or for the Service. I didn't get enough more work done to justify the mileage cost, I passed up country that I should have got into, and at 7¢ a mile it cost me some 5¢ a mile to run the car on official travel.

The horse isn't a back number yet, on most of the Forests at least. Webster's opponents can trade theirs for gas and oil if they want to, but there are still several of us who would rather take life a little slower and see all of our districts more frequently. Dobbin ain't dead yet. Why, man, he ain't even sick!

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THE CONTROL OF FIRE CONTROL

By Howard R. Flint, D-1

In an item headed, "Does Fire Control Need Control," in the SERVICE BULLETIN dated July 7, Mr. Headley invites discussion of fire control expenditures. As no discussion has followed it seems that Mr. Headley floored his opponents for the count, or perhaps he strangled them through the use of the Operation purse string. Maybe, too, there just isn't more than one side to this argument. Mr. Headley implies that such discussions are of common and frequent occurrence in Washington. They do occur at times in District offices, but they become less and less common as one proceeds toward the "sticks" from whence the big mushrooms of smoke arise. Doubtless from July 7 to date, everyone in the western field has been too busy controlling fires or clearing up the after effects of them to propound any written discussions of the problem.

From the standpoint that we are not getting full value for our dollars spent in fire control, it is probably true that we are spending too many of them. This is true because we have not yet developed sufficient knowledge and skill in the task to prevent the frequent recurrence of Class C fires with their attendant enormous expenditures.

For any given area it seems probable that no person is prepared to answer the question, "How much should we spend here?" Our knowledge has not yet reached that stage. Until someone finds a way to reduce the term "adequate fire protection" to dollars and cents for a given area, it is of little use for anyone to affirm that we are spending too much for fire protection in any sense other than the one suggested above.

It is entirely true that there are localities in the United States, and particularly in Alaska, where very little expenditure for fire protection is warranted because the danger of fire loss is extermely slight. It is often true, although not always so, that such areas are of low timber-producing value as, for example, the lodgepole pine forests at the higher altitudes in the Rocky Mountains, where the past fire history indicates that serious fire years occur only at rare intervals, and where very low values are at stake. Certainly, on areas where there is little timber to burn, actual or potential, there should, other values being equal, be less fire-protection money spent than on highly productive areas.

The Forest Service fire record for the five-year period 1918 to 1922, inclusive, is as follows:

Average area burned yearly	746,115 acres
Average percentage of net area burned yearly	0.48 per cent
Average annual damage	$1,347,028
Average annual fire-fighting costs	1,112,000

Certainly, with such a fire record, we are in no position to argue ourselves into the belief that too large a percentage of our brains and energy is going into the solution of the fire problem. According to our records about one-half of one per cent of our net area burns each year. Our fire-fighting costs and damage, the latter grievously underestimated in the past, are roughly equal to our gross timber sale receipts. Probably, on an average for the National Forests, the rotation for saw timber, our major product, is at least 100 years. Our fire rotation is 208 years. Isn't it probable that we are burning up wood about half as fast as we are growing it? The argument that much of our burned area is a reburn of previous fires is really beside the point when a future timber supply is considered, for we can have no 50-year old or 100-year old trees until after they have successfully passed through the 10-year old stage.

There are many foresters doing common protection tasks in the Federal Service in the West, who by inclination and training would greatly prefer the gentle science of silviculture to the manly art of fighting fire. Probably there are none that do not deeply regret the heavy outlay of funds for an activity most of which should be unnecessary. However, 16 years of experience, much of it disastrous and disheartening, has pointed out the narrow path that must be followed to grow wood. Their steps falter a good deal, but they are following more closely than they did in 1910, and in spite of all of the attractive side-line will-o-the-wisps that are flashed across their field of ~~action~~ vision, they may yet leave behind them a heritage of wood that another generation of foresters can train in the way that timber should grow.

It might be a fine thing to carry out the refinements and embark on the innumerable side-lines that from time to time are enthusiastically advocated as proper Service activities, but the Secretary of Agriculture in turning the charge over to the Forester in 1905 made this very significant statement: "You will see to it that the water, wood, and forage of the reserves are conserved and wisely used for the benefit of the home builder * *." Would it be the part of conservation and wise use for the Forest Service to "tinker around" on other matters while the wood burns up half as fast as it grows?

Undoubtedly, we are wasteful in some of our methods and practice in fire protection. Here then lies a golden opportunity for the critics who, Mr. Headley says, "stoutly assert that fire control is hogging the right of way." They might just step out into the field and show us by practical demonstrations how promptly and cheaply to dispose of this little matter of a few forest fires. After that is done they will have what is left of a lifetime in which to do, without interruption, the real things that a Forest Service should do, for be it remembered that in the Forests of the United States there will be very little successful forestry until the fire problem is truely conquered.

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THE FOREST PRODUCTS LABORATORY

Utilization Conference Boiling: Headed by Mr. Winslow, several men of the Laboratory's staff are now sojouring in Washington where they are putting the final touches on the plans for the National Conference on the Utilization of Forest Products, which is to be held in Washington on November 19 and 20.

The forthcoming conference is the first comprehensive attempt ever made in the United States to place the efficient manufacture and use of forest products on the same plane as the other two phases of a constructive forest policy, namely, promoting forest growth and protecting forest lands, principally from fire.

The conference is to be attended by prominent men from all over the country, representing not only manufacturers, dealers, remanufacturers and users of lumber, timber, pulp and paper, and other forest products, but also the engineering and forestry professions, educational institutions, the trade and daily press, and the various Government agencies.

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FOREST EXPERIMENT STATIONS

What won't the Monterey Pine Do? According to a New Zealand item, a single Monterey pine yielded 4300 feet of lumber and 300 fencing battens when sawed. Cordwood from the refuse amounted to 6 cords. The value of these products was $250. The tree was 45 years old, 126 feet in height and 15½ feet in circumference.

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DISTRICT 1 - NORTHERN DISTRICT

Another Grizzly Story: Members of the land exchange crew on the Blackfeet Forest were working in the high mountains of the Whitefish-Stillwater divide when a couple of them spied a grizzly approaching them along the trail. The leader opened fire with a revolver of small caliber. Six shots took, but with no effect other than to enrage the grizzly and speed his coming. The packer then opened fire with a 25-20. He emptied his six shells and finally stopped the grizzly within hugging distance of the other man.- M.H.W.

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Touristry - A new Word: An interesting review of an Italian article chronicling the establishment of an 82,500-acre National Park in Italy is to be found in the October "Review of Reviews." It also contains the word "touristry" used in the sense of the business or activity of providing conveniences for and handling of people bent on recreational trips. This word may have received currency elsewhere, but it seemed so appropriate to much of our endeavor in the development of the recreational values of our National Forests that it is submitted as a valuable addition to the Forest Service vocabulary.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

The San Isabel Remains the San Isabel: Recently the attention of the Forester was drawn to an apparent inconsistency in the name San Isabel as applied to our National Forest by that name in southern Colorado. Persons interested raised the question of gender, claiming the prefix "San" in the Spanish language is applied only to masculine names, the prefix "Santa" being the proper one for feminine names. There is no question, of course, but that the word Isabella is feminine, being the Spanish equivalent for our Elizabeth.

The point seemed so abvious that it was taken up with both the District Forester and the United States Geographic Board with a view to obtaining what information there was available as to how, when, and why this somewhat distorted name was applied to our National Forest. As far as local conditions are concerned, the only points shown on the maps of the region which had this name attached to them were a small creek draining into San Luis Creek and a former crossroads post office, discontinued in 1912. The post office and most of the stream, as a matter of fact, are well outside the San Isabel boundary.

The District Forester furnished additional information to the effect that in a report dated February 22, 1909, discussing the history of the San Isabel Forest, it was stated that

> "A settler named Travis in 1870 settled on a creek having its source in the Sangre de Christo Range. This creek he named the San Isabel in honor of Isabella, Queen of Spain. The Forest took its name from this creek."

Just why the area was called San Isabel, in view of the extremely small importance of the stream and post office bearing that name, is not clear.

The merchants of the city of Pueblo adjacent to the Forest have been very enthusiastic in their support of our administration of this area and object to any change in name, with which District Forester Peck agrees. Restaurants, hams, bacons, cigars, candies, and various articles sold or used locally have been named San Isabel. The benefit of this advertising and publicity is so great and the name has become so much of a fixture that a change is not considered advisable. Therefore this name will probably persist in spite of its rank violation of the Spanish rules of grammar.- W.C.B.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Forest Service Weed Knowledge Helps Army Officer: An account is given in the Gila Bulletin of a dry weed that was recently brought to the Supervisor's office by Sergeant Foley, the stable boss at the cavalry corrals in Silver City, New Mexico. One horse had died from eating hay containing the weed and two others were sick. The weed was identified by Deputy Supervisor Putsch as whorled milkweed. Mr. Putsch accompanied the Sergeant to the corrals and observed the affected horses. He describes the symptoms as a nervous twitching of the legs, slight salivation, a tendency to weakness in the legs and general restlessness. Purgatives were administered and it is expected that the horses will recover. Mr. Putsch suggests that Forest officers look up Bulletin No. 800 in their libraries and refresh their minds on the whorled milkweed in order to be prepared to discuss it with permittees and alfalfa farmers when it is known that the weed exists.

* * *

Southwestern City has 64,000 Shade Trees: Phoenix, Arizona, headquarters of the Tonto National Forest, according to the City Engineer of that place, has 64,000 shade trees along its public streets. These trees in a forest with a hundred trees to the acre would make a section of timber. Ash predominates among the shade trees of Phoenix, with the umprella, palm, eulacyptus, pepper, and cottonwood following in the order of their popularity.

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DISTRICT 5 -. CALIFORNIA DISTRICT

"Read 'Em and Weep." There is one bit of news that never grows stale, never fails to attract the eagle eye of editors, and is always given prominent display in newspapers - and that is a rip-roaring, smoke-belching forest fire. And the nearer the fire happens to be to a big center of population, the greater the amount of space and the more "streamer" headlines it commands.

We have seen and fought a lot of forest fires in the past twenty years, and have written and read about a heap more, but for Simon-pure, spectacular space-getting publicity we unhesitatingly and without malice aforethought award the gold-mounted, India-rubber, long-handled fire shovel to the San Gabriel fire that recently occurred in the Angeles National Forest. For more than three weeks this conflagration obscured the sunshine of "Sunny Southern California," and thwarted the concentrated efforts of 2,000 men to conquer it. And every one of these hectic days, from press associations, newspaper offices, and special correspondents the story of the "Red Terror" of the Sierra Madres kept the telephone and telegraph wires sizzling and clogged the ether wave lanes of the Pacific.

The Los Angeles press clipping bureau wavered and nearly collapsed under the flood of news items that poured into its office, but from the best service we could obtain the following illuminating facts have been gathered: A total of 423 news items and editorials, on the San Gabriel fire alone, appeared in the course of three weeks in southern California newspapers. Twenty-four times the front page of city dailies blazed forth with streamer headlines telling of the onrush of the menacing flames. The total number of column inches of publicity received by this fire 6,209, and the average length per item was 15 inches. The longest story ran 89 inches; the shortest item one inch. This total publicity if combined into one metropolitan newspaper would make nearly 45 pages of solid reading matter. And in the above total no account was taken of news items in papers published north of the Tehachapi.

With the modesty (?) common to all Californians, we submit these one-fire publicity figures as world beaters.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

"How Far Can a Spark Fly?" An article appeared in the SERVICE BULLETIN some time ago giving an account of a fire in D-3 being started 19 chains from the main fire by a spark, and it said it was believed to be the record distance a spark could fly and set fire.

On June4, 1924, on the Wind River Lumber Company's operation on the Columbia Forest, a spark started a fire a measured distance of 160 chains (2 miles) from the main fire. The wind was blowing appoximately 18 or 20 miles an hour from the northwest. This fire burned over 600 acres in spite of the efforts of 130 men.

Pacific Logging Congress: The 15th Annual Meeting of the Pacific Logging Congress was held at Portland, Ore., on Oct. 22-25. Addresses were made by the following Department workers:- W. H. Gibbons on "The Work of Forest Products"; T. T. Munger, "The Northwest Forest Experiment Station"; "Diseases of Douglas Fir," by Dr. J. S. Boyce; "Blister Rust," by Stephen N. Wyckoff.

A Big Fir: Near Mineral, Washington, is a giant Douglas fir which was known by the late Supervisor G. F. Allen as early as 1890 and which was measured in 1909 by T. T. Munger. Recently it was accurately remeasured by Junior Forester McArdle of the Experiment Station, who found it to be 15 feet 4 inches in diameter at breast height. In spite of a broken top, it is about 225 feet high and over 100 feet to the first limb. Vandals have recently burned a hole eight feet deep into the base of the tree. Nevertheless, it appears hale and hearty for its many centuries. The six and seven-foot trees in the forest about it look like "second growth" in comparison.

DISTRICT 7 - EASTERN DISTRICT

A New One? The Cherokee Forest sends out some 500 Form 5A vouchers each year for signature and return by individuals and concerns furnishing the Forest Service with service or supplies. Few of the payees have more than a vague idea of the National Forest. Each voucher is accompanied by a form letter, instructing the payee briefly how to sign and return the voucher to the Supervisor. Forest Clerk Dupree intends that hereafter this form letter will do more for the Service than simply get a voucher signed and returned; that it will in fact do its bit in the general task of public education. Each such letter from now on will carry as a postscript, or as a slip enclosure, a two or three-line paragraph giving the recipient one salient fact about the Cherokee. Here are samples:

> "THE CHEROKEE NATIONAL FOREST has four lookout towers located on its highest mountain peaks. Fires are located from these towers and their location 'phoned to Forest Officers who, with men and supplies, go to the fires and extinguish them."
>
> "THE CHEROKEE NATIONAL FOREST has had 61 fires to date this year, all but one man-caused. Prevent forest fires - it pays."
>
> "THE CHEROKEE NATIONAL FOREST has two hydroelectric power plants within its boundaries. Forest protection regulates and sustains streamflow."

The mimeograph will do most of the work connected with carrying out this excellent idea. The stunt is well worth the consideration of every Forest, and is usable in other ways than solely in connection with the 5A vouchers. - J.E.S.

PUT OUT - NOT PATROL

By F. A. Thompson, Malheur

Fire cooperation on the Malheur Forest is not always everything we might desire, but occasionally we do get some regular help.

In July a fire originating from some smoker along the road adjacent to the Big Bear Valley timber sale area threw up a lot of smoke and spread quite rapidly. Ranger Radigan was on the scene in 15 minutes, found a half dozen men already ahead of him, and within 30 minutes over 40 men were on the ground. These men came without request from any Forest officer.

In July a fire was reported on Yellowjacket Creek. Chaser Cochran, 10 miles away, was the nearest man. He was on the fire in three hours, horseback. He found 8 men ahead of him who had ridden from 4 to 8 miles horseback from surrounding ranches and a sawmill. When Ranger Bennett and I arrived late that night with some of the road crew the fire was under control at 60 acres. These men also turned out without call.

A fire at the edge of the timber, 14 miles north of Burns, started at 11:50 A.M. The writer was on the ground from Crow Flat R. S. in 40 minutes. I found 4 men ahead of me and within an hour and a half from the time the fire was first sighted three cars pulled in from Burns 17 miles away, loaded with men and with their tools. No one requested these men to come; smoke in the timber was sufficient to start them.

We find the following to be true in every instance: These men will work themselves to death to check a fire, will fight it as hard as could anyone. However, once they get it checked they are prone to call it a day and start for home. Then is the time we need a Forest officer on the job to direct the work of clearing up and making safe. The word PATROL should be stricken from our fire vocabulary and glossary and "clean-up" substituted for it. There should be no such thing as "watching" a fire or simply "patrolling" it. The squad left with a fire after it is controlled should be designated the "clean-up" squad.

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Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

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CRÊPE HANGING

Why is it that every once in awhile some one in the Service has to think up some new scheme for hanging crêpe on a "poor Forest Ranger's" hopes and aspirations? Here we are no more than settled and "sitting pretty" under reclassification when along comes Guthrie of D-6 with a proposal to shoot us around like a shuttle train on a city loop. Now his arguments may sound all right to a man who lives at a club and has nothing but a cross-word puzzle to keep him home, but to a Ranger with a wife and twins and taxes to pay they're about as welcome as a midnight fire call.

Most of us got about all the "mobile personnel" business we wanted during the late lamentable war, and are quite content to "sit tight" and get a chance to wear our slippers once in awhile. We have distinct recollections of the elation at home over the news of our last transfer, when we sold the house at a loss, gave away most of our junk, took the kids out of school, and made a grand trek to parts unknown. We realized then the truth of the old saying that "three moves are as good as a fire."

The author of "Mobility" is, we believe, wrong in his contention that reclassification is going to result in increased transfers and changes of personnel. There will, of course, be some realignment of field forces, but it's a "cinch" that the Rangers in the topnotch positions are going to stay on the job until the trumpet blows, or the Boss fires them. Men in the less important districts who have established a home and reached the head of their grade will also hesitate in many cases over making a transfer to a higher grade where they will have to start in at the minimum salary, but little above what they are now getting. Such a move may or may not be to their advantage, depending on how they are situated. Thus there will be fewer, not more, changes, and less jobs to fill.

No, brother, we don't want to be in the same class as traveling "sky-pilots" who are shifted annually. We are strong for a home of our own and a family and all the social and educational advantages that sticking to one spot afford. If you take them away from us you had better disband the Forest Service, or else go back to the "good old days" when about all the qualification needed to become a Ranger was to be single, know how to cook your own grub, and ride a bronco.

Them's our sentiments!--A Sufferer, D5.

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IS A NARROW ROAD DANGEROUS?

By T. W. Norcross, Washington

A year ago, I was talking with an engineer employed by a big manufacturing establishment about the research work which modern business finds necessary. I was particularly interested in his statement that the interpretation given to completed experiments depends very largely upon what the interpreter himself wants to prove. And each interpreter might be entirely honest. This statement seems to apply equally well to statistics on road accidents. One man can take certain data and convince himself that a 4-track paved road is much more dangerous than a 2-track road. But our common sense tells us that, other things being equal, he is wrong. Or another man may argue that the straight road is more dangerous than the curved road, while both are more dangerous than the railroad grade crossing. But again we know this isn't so, for such a conclusion fails to take into account the speed and volume of traffic and also that many a driver while reckless on the straight-a-way is less reckless on the curves and actually quite careful on the grade crossings. He knows the danger and governs himself accordingly.

For any road there is a certain maximum speed at which a vehicle may be operated with reasonable safety, provided nothing breaks on the vehicle itself. When that speed is exceeded the possibility of disaster enters in, not only to the vehicle itself but often to other users of the road. This maximum speed is not a constant for all kinds or types of vehicle; neither is it a constant for all time for any one vehicle. The determination of this maximum speed depends upon many factors, among which may be mentioned the road width, alignment, and other elements of road standard, also the volume and kind of traffic, the speed of other vehicles, the degree of care and skill exercised by drivers, and the number and kind of natural danger points. This is not a complete list.

What about the narrow, winding roads? Are they dangerous? It is pointed out that the number of accidents is not large. Are the roads so much safer than straight roads, double-track roads, railroad crossings, curves and tangents on the main trunk roads? My answer is, no. The fewer accidents on mountain roads are not because they are narrow and crooked, but because the volume of travel is comparatively small and the vehicles are operated in a decidedly different manner than on the wide, straight, and paved roads.

Reckless drivers will always be with us and a source of danger to themselves and others. We find fewer reckless drivers on the narrow, winding roads than on the straight, wide, paved roads. Even they realize the danger. Does the careful and skillful driver operate as fast as he does on roads where statistics show that there are more accidents? Decidedly, no! He knows that he must operate at not more than the maximum safe speed for that road and at that time; he knows his wheel gage is less than five feet and apparently should not be worried when he seems to have almost as much more to spare. But he is bothered by many things - the sharpness of curves; the stability of fill slopes; the possibility of meeting another vehicle, especially the take-a-chance driver; the possibility of something happening to his steering gear, tires or other operating parts, and the constant reminder on dugway sections of what will happen if he goes off the road. As a result, he frequently operates at less than the maximum safe speed and the reason is because he senses danger. If experienced and hardy mountain drivers feel the danger, it seems to me that it must exist.

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FIGHT FOREST FIRES BY PREACHING AND PRACTICING FORESTRY

By H. N. Wheeler, Washington

Forest fires will never be prevented to any great extent by simply preaching fire suppression and recounting the acres burned over and property damage done. This line of attack will help some, of course, just as rigid enforcement of fire laws will help, but until people realize the value of the forests, both present and potential, they will not be worried much about forest fires and will take few precautions to see that fires do not start. As long as the farmer believes broadcast burning helps him to clear land, and as long as the acres he has always considered waste are still regarded in that way, there will be fires in the land-clearing, farming regions, despite all the laws enacted and rules put into effect. The same is true of the fisherman, hunter, and camper. Until these people realize forest fires are detrimental to their interests, they will continue to be careless. They are beginning to have some conception of the fire menace, and yet in the State Ranger district of Duluth, Minnesota, 25 per cent of the more than ninety fires and 74 per cent of the area burned in 1923 resulted through the carelessness of fishermen. The resort keeper knows that forest fires injure his business by destroying the beauty of the scenery and filling the country with smoke, so he believes in fire prevention.

The local gasoline venders and small storekeepers do not yet fully realize that tourists are kept out of burned-over, smoke-filled country, so are not yet fully sold on preventing forest fires, especially if the farmer insists he must burn to place more land under cultivation. The lumbermen are now mostly aware of the damage done to standing timber and are willing to spend money to prevent the burning up of their holdings, but are not yet sold on the idea of protecting the young growth.

It is necessary that people in all lines of business understand what forestry is and the need for it, not only in a general way but what it means to each local community, whether in a once heavily timbered region or in a prairie country where the only timber is in the farmer's woodlot or on the waste land along the streams. When all classes understand what real forestry means to them and that fires are really damaging, then fires will become less and less and finally disappear.

To attain this end it is necessary that a nation-wide educational program be put into effect.

The farmer must be taught that fires, except those necessary to burn brush in piles or windrows, do great damage by destroying the humus of soil to be cultivated and so impoverish it, and that his waste land is really valuable for raising timber if he keeps fire from destroying humus and young trees that can be replaced only at great expense. Hunters, fishermen, and all lovers of the great outdoors must be made to realize that fire damages it.

The big lumbermen and small timberland owners must be made to realize that burning retards reforestation and that forestry will pay. To accomplish these ends will require the use of all means of education by the spoken and written word before audiences of all kinds and description, but most of all in the schools. Forestry should be taught in all the schools of the nation from the primary grades up through high school and college. Furthermore, all clubs, Rotary, Lions, Kiwanis, and other men's clubs, women's clubs, Chautauquas, lyceum courses and other educational institutions must have the facts. It is the job of the Forest Service, the recognized head of forestry in the United States, and the time is ripe for organizing a nation-wide campaign so as to put over once and for all a forestry program and sell for all time the idea of conservation and forestry in particular.

The latter is our special concern and it is up to us, else the leadership in the movement will go to others. When the country is convinced of the need for forestry and people begin to practice it, our fire problem will be solved, and not before. Just preaching fire prevention and suppression has been a failure. The direct attack has not brought the results. I sometimes question whether most of the Forest officers themselves really understand what it is all about and whether we are not so engrossed in our little local problems that we have not yet grasped the wider vision of a nation-wide practice of forestry by the United States, State, county, township, and city governments and by the large and small private owners.

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WASHINGTON NOTES

Family Gatherings: The second of the current series of Family Meetings was held November 5 in the National Museum auditorium, Mr. Barnes being the speaker of the day. His subject, "Some Field Headquarters and Their Environs," was illustrated by a mighty spiffy bunch of slides; but the real illuminating and moving moments came when the polished gems of description fell with machine-gun precision from his eloquent lips. As might be expected, Mr. Barnes confined his remarks and illustrations almost exclusively to his beloved Southwest.

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Hopeful Prediction:: A long review of the Forester's last annual report in the French "Revue des Eaux et des Forets" ends with this hopeful prediction:

"The report lets us foresee the moment, no longer far off, when the application of appropriate cultural methods will permit conserving and even largely increasing the immense forest resources whose thoughtless and disorderly exploitation in the past seemed fated to reduce them to progressive ruin."

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DISTRICT 1 - NORTHERN DISTRICT

Pine Beetle Infestation Increasing: A recent report has been received from Mr. Evenden of the Forest Insect Station at Coeur d'Alene, which indicates a very discouraging situation in the lodgepole pine on the Missoula, Deerlodge, and Bitterroot Forests. The mountain pine beetle infestation, which started near Seeley Lake in about 1911, and which has cleaned up most of the lodgepole and a good deal of the yellow pine on the Big Blackfoot drainage, has been steadily moving southward through the Missoula Forest and is now threatening the biggest body of mature lodgepole pine in the District on the Upper Rock Creek, East Fork of Bitterroot, and Big Hole drainages. Last spring an attempt was made to check the invasion by establishing a defense line across the Missoula Forest near Georgetown Lake, taking advantage of natural breaks in the timber, the plan being to treat all infested trees as rapidly as they appeared south of this line. Several hundred trees were felled and peeled last spring. A thorough reconnaissance of the area south of the line was made during the summer by Mr. Evenden's assistant, Mr. Rust, which disclosed the fact that the infestation had spread so generally across the line that further control work seems hopeless. On the East Fork of the Bitterroot, which contains a very fine body of lodgepole tie timber, large areas are so badly infested that whole mountainsides are covered with red-topped trees. It looks very much as though the main body of lodgepole in the District were doomed to destruction, and with very little hope of extensive salvage.--E.K.

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In Memoriam: The District Forester has selected and set aside on the Cabinet National Forest a public service site known as the E. B. Clark Memorial. This very beautiful spot on the Thompson River is dedicated to public recreational use in memory of Ranger E. B. Clark, who in 1915 while on duty was accidentally shot and killed by a hunter. Friends and coworkers have made up a small subscription for a bronze tablet, which is to be set in a large granite boulder, and for other minor incidental improvements which cannot ordinarily be paid for from Federal appropriations.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Snowshoe Rabbit Damage in Minnesota Forest: Recent investigations by Assistant District Forester Hatton bring to light the fact that the very extensive damage by snowshoe rabbits to plantations within the Minnesota and Superior National Forests, as well as to natural reproduction, particularly of Norway and white pine, has practically ceased. It appears that the seven-year plague which, according to local belief, kills off the rabbits has returned with the result that where rabbits formerly numbered in the thousands they are now hard to find. There is a diversity of opinion as to the cause of the scourge which has eliminated this pest; one faction believing that it is caused by wood ticks and the other a plague which manifests itself in sores or blisters on various parts of the body. Tremendous damage has been done by these animals during the past year or two and plans are being laid so that in the future the pest may be controlled when it becomes at all serious. Remedial measures suggested include the opening of a yearlong hunting season on rabbits, snaring, and the issuance of a bounty.

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Movement of Livestock: Very heavy movements of livestock are coming to the Denver market, and prices are about on a par with the low spot three years ago on all kinds of cattle. This amounts to about 8 per cent below the prices received for steers last year and 10 per cent below the prices on cows and heifers a year ago. Sheep are holding up well and the stockmen who are in a position to finance them are leaning very strongly to this class of stock to bolster up what cattle they may carry over.

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DISTRICT 4 -- INTERMOUNTAIN DISTRICT

Back from the Weiser: Mr. Harley J. Helm is back from the Weiser where he was engaged in Grazing reconnaissance with Mr. Wall during the summer. They covered about 170,000 acres on the north part of the Weiser at a cost of approximately 1¢ per acre.

Helm reports an excellent deer hunting season in the vicinity of the Weiser, the deer being unusually plentiful at low elevations. At the same time the hunters, cheered by the dry weather and plentiful deer, penetrated unusually far into the backwoods with automobiles, going to places never before reached by cars, and then suddenly it began to snow. Their cars are now snowed up in the backwoods with little chance of extricating them until spring. At some points on the Weiser Forest it snowed three feet in two days.

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Courtesy Pays: Not so long ago I walked into a Supervisor's office and found in charge a man I had never met. He was engaged in a telephone conversation and beyond a glance did not give any sign that my presence was noticed. I wore no uniform or anything to indicate that I was a Forest officer, which is a point to be emphasized; that is, I got the same reception that would have been accorded a user.

The telephone conversation lasted at least ten minutes and seemed much longer. Probably it all concerned forest business but to me, standing first on one leg and then the other, the thought occurred that the local officer might have stopped talking long enough to say, "Excuse me a minute," or something along that line. It reminded me somehow of the way the R. R. station agents used to keep us waiting until it pleased them to notice our presence. Public service corporations have learned in recent years that courtesy to the public is the first essential to securing good will, without which hard luck is likely to follow.

The experience I have related certainly is not typical of what the public finds in Forest offices. Probably such a case is exceptional. Let us hope so. No one likes to be ignored. We can be courteous without material interference with business.--C.F.K.

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DISTRICT 5 -- CALIFORNIA DISTRICT

Why Two Fire Prevention Weeks? It appears to me that there is no correlation between different agencies all looking toward the same end. Why two fire prevention weeks? True, it could be said that Forest Protection Week and Fire Prevention Week are separate and distinct. But to my mind the two are closely related and the best results would be secured if we could combine the two. Damage by fire to buildings, etc., as with forest fire, is undoubtedly most severe during the summer season. We have Forest Protection Week before the dry season to prepare people's minds for the dangerous period. Why not have Fire Prevention Week at that time? Looks like the Forest Service is overlooking a bet.--G.W.L., Modoc.

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He Believes in Signs Now: R. N. Zubra of Los Angeles paid a fine of $50 in Justice H. K. Stahl's court at Corona, California, on October 14, for building a camp fire in Hagadon Canyon in the Cleveland National Forest. District Ranger F. I. Snider, who arrested the Angeleno, stated that he found Zubra's fire under a tree with a Forest Service sign on it which read "Dangerous Fire Area - No Camp Fires Allowed."

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DISTRICT 6 - NORTH PACIFIC DISTRICT

We Rise and Bow: The following was one of the resolutions passed at the Pacific Logging Congress, Portland, Ore., Oct. 22-25, 1924:

"We wish to express our appreciation of the efforts of the U. S. Forestry Department in behalf of the lumber industry of the nation, and to particularly commend its policy and the able officers representing it in the territory embraced by the membership of the Pacific Logging Congress and we pledge our continued support to these officials in any practical and constructive projects they may institute for the mutual benefit of our industry and the welfare of the people of the nation."

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Eagle Creek Visitors: Up to September 22 a total of 24,369 persons had actually registered at the Eagle Creek Forest Camp on the Mount Hood Forest. A total of 4,664 cars had remained at the camp overnight. Over 400 persons hiked up the Eagle Creek Trail on July 4, and again on Labor Day. Eighteen persons were arrested along the trail and at the camp during the summer for failure to extinguish fires; all pleaded guilty and were fined.

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

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SELLING TIMBER OR TAKING ORDERS

By Fred B. Agee, Cochetopa, in the November D-2 Bulletin.

I read with quite a little interest Mr. Tinker's discussion in the D-2 Bulletin of the recent increase in timber sale business, in which he boldly accuses us of simply taking orders for timber in 99½ cases in a hundred, and challenges us to disprove it.

On some of the Cochetopa working circles, the actual timber marketed is so far below the allowable annual cut that it is a rather painful subject, and one which I would rather not discuss except when it is forced upon me. However, we are making progress, and do feel that there is a reasonable field for salesmanship both in interesting prospective operators in our timber and in placing them where they will best fit in with silvicultural needs, also in placing them so that each Ranger District will carry a fair share of timber sale administration.

In starting in to sell timber (I am not going to admit that all of the business is forced upon us), we found that it was not much different from any other salesmanship proposition, that what we needed was at least a fair general knowledge of what we had to sell, just what bodies of timber were for sale, estimated amount of each, approximate logging and transportation costs, and the price the product would bring on the market. Undoubtedly a ten per cent estimate of the timber and an appraisal showing logging costs would be desirable in advance of opening negotiations, but it is not always possible to have them, and a person can get along with approximate data.

Another thing which we find we are needing is more complete information on possible markets, freight rates, and other information bearing on the outlets to them. We found upon going into it, one or two possible markets for timber products that we did not know existed or at least we thought them out of our reach.

With this information one is in a position to show the prospective purchaser approximately what he can realize on the proposition, and that is the thing in which he is most interested. And that is about as far as salesmanship should go in selling timber. If there is not a reasonable profit in it for the operator, we had better leave it alone. We will simply be selling ourselves trouble for later on.

Another element bearing on timber sale expansion that was brought home to me rather forcibly the past year is that of good systematic sale administration, keeping the sale well lined out so that the purchaser is not unnecessarily hampered in his operations. I call it business administration.

About a year ago an operator was in the office negotiating a sale of timber. We had gone over the whole proposition. He said it was all right and then remarked that he knew the Ranger and he was all right. He believed he would apply for the timber. His remark in regard to the Ranger was somewhat ambiguous to me. I had visions of the Ranger having allowed high stumps, of his permitting operators to pass up diseased trees, and doling out other prohibited favors. I immediately asked in what way the Ranger was all right. He replied, "You don't have to wait on him; he keeps his timber marking ahead; he makes regular trips to the sale; he keeps his promises as to dates of scaling; if anything is wrong in the woods, he tells you about it at the time and does not allow the trouble to accumulate, then gives you a few days' notice in which to fix it up under penalty of suspending operations," etc.

Although it was the prospective purchaser's first venture on that Ranger's district, I learned later that he had at one time worked for another operator on it. I thought I was selling the prospect the timber. But what had really happened was that the Ranger had already sold it by the kind of sale administration he was giving his purchasers.

I had never before realized how closely Forest users measure the quantity and quality of public service rendered by Forest officers, and fell to wondering how many of them had weighed me in the balance as a Supervisor and whether they might not have found me wanting.

It also brought home to me how much loss a Forest officer could, perhaps unwittingly, inflict upon an operator through unsystematic administration, by failing to come on the scheduled dates for scaling, by occasionally delaying choppers for lack of marked timber, or by other laxaties which delay the operator and compel him to work his crews to disadvantage. I could not help but think how much more actual loss of money to the operators was involved in things of this kind than in the cutting of the few diseased trees and all of the other rather meager sacrifices to silviculture required of him combined. I also could not help but wonder if things of this kind did not in a degree stand in the way of our expanding our timber sale business to the amount desired.

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WHAT CONTROLS THE CAPACITY OF A ROAD?

By T. W. Norcross, Washington

Speaking broadly, roads render service in two ways, (1) to property and (2) to traffic. At times the value of service to property determines the justifiable expenditure and the road standard. More frequently the traffic requirements control.

Perfect service to traffic is based upon many things - comfort, safety, minimum cost of operation, etc. - and frequently the desired road cannot be secured. The cost is usually the reason. The objective, then, is to expend the available money in such a way as to get just as nearly as possible to the desired perfect service. In making the decision, the future demands of traffic must continually be kept in mind, otherwise money may be wasted.

One of the traffic demands is ample carrying capacity. This capacity is controlled by width and by speed of travel. A wide slow-speed road may have the same capacity as a narrower road permitting higher travel speed. Usually it is less expensive to get capacity through speed than through width. Safety is another question.

For the National Forest roads, the amount of travel on unimproved roads is not now large, but usually this increases by leaps and bounds as soon as an improved road is opened to travel. As a result, we have congested roads and these will become more congested as time goes on. We must realize this in deciding upon our road program and the road standards. There will be some roads for which single track with turnouts will suffice, even though the traffic speed is low; there will be others where both double track and fairly high speed are obviously necessary. But what about the in-between roads? Shall we increase the width or the speed? Sometimes the latter is the right answer, especially on the Forest Development Roads, since a fairly high speed single-track road with adequate, properly designed, and well-placed turnouts will often defer for years the necessity of double tracking.

Since expenditure upon roads is made in order that certain definite service may be given and since speed of travel is one of the factors determining the road service, each road should be designed for a certain specified speed. An average of 12 miles per hour may be deemed entirely satisfactory for a Forest protection road, but the main trunk highway of Connecticut if designed for this speed would be an absolute failure.

The speed of travel is determined by a large portion of the elements which make up the road standard. Alignment is an important factor, as obviously a straight road is faster than one with curves. Unless a curve is of proper radius or increased width is given, there will be a slowing up of travel not only on the curve itself but on the approaches. Gradients requiring use of low or intermediate gears reduce the speed, and if these must be retained, the maximum safe speed on other sections must be greater than the average speed of the entire road. The effect of width on speed is evident; this may be discussed at a later date. On a single-track road with turnouts, the speed of travel will be reduced not only because of the time spent in passing but also due to the possibility of meeting another vehicle. The speed, therefore, is affected by the amount and character of travel. The speed of any vehicle is also affected by that of other vehicles. A truck, for instance, on a single-track road may slow up all other traffic. The service of an entire road is frequently controlled by one section where, due to curvature, gradient, or width, the capacity may be much less than that of other sections.

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WHAT ABOUT STRYCHNINE POISONING?

By Will C. Barnes, Washington

There has always been a question among trappers and western stockmen as to how far the effects of strychnine poisoning may be transmitted through animals and birds subsequent to their having eaten the carcasses of animals poisoned by strychnine.

A recent report of the Biological Survey contains the following information, written by one of their men in Alaska who is a trapper and explorer:

"According to my own observation the killing power of strychnine, which causes undreamed of damage, has been transmitted through four subjects, and I believe it is a well authenticated fact that it has been passed from one animal to another through eight subjects.

"Example: I put out a poison bait which is taken by a Fox. After removing the pelt I throw the body away. It is eaten by Wolves, Ravens, and the Whisky Jack or common camp robber. They in turn are eaten by the mice, and another Fox comes along and considers himself fortunate in finding a score or more of dead mice for his supper, which he proceeds to eat. Result, certain death, so on Ad lib."

Have any of our Forest officers had any experience in this matter as to either side of the question?

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WASHINGTON NOTES

North Carolina Gets the Gold Watch: One of the District Foresters of the State forest service department of the North Carolina Geological and Economic Survey claims the record for showing a forestry film. PINES THAT COME BACK was shown 45 times in three days (19 times in one day) at a recent county fair in eastern North Carolina. Not as many people stopped to view the forestry exhibit as the attendant of the booth desired. The moving picture machine was part of the exhibit; so he started it going. The hall was so gloomy that the electric lights were necessary during the day. The screen was a 30-inch square of white cardboard. The lantern was some 12 feet away. A bright picture about two feet square was shown. It is estimated that over 3,000 people saw more or less of the reel and carried away a definite idea of the forestry exhibit. Many more must have received some impression.--H.P.K.

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It Was a Bald Eagle: Ranger L. S. Kartchner of the Sitgreaves National Forest, located at Showlow, Arizona, recently reported having seen a black and white eagle at his station several times last winter. Kartchner stated that this bird was a stranger in that region and therefore attracted considerable attention. He described it as being perfectly white as to head and neck while the body and wings were jet black.

A description of this bird was sent to the Biological Survey and quickly identified by their experts as the well-known "bald eagle." The Biological Survey was greatly pleased with having a record of this bird from this part of Arizona.--W.O.B.

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FOREST PRODUCTS LABORATORY

Utilization Conference Goes Big: That the Timber Utilization Conference was a pronounced success is the unanimous opinion held by the members of the Laboratory's staff who sojourned in Washington during the week of November 17. Over 400 delegates were in their seats when President Coolidge started the ball rolling with an address that was strong and direct. Secretary Gore and the Forester also told the conference a few things that woke up the listeners. It is hoped that a complete story of the conference will be written for the next issue of the SERVICE BULLETIN.

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Day at Laboratory Equals Twenty Years' Experience; "The writer might just say that the pleasant memories of a trip to Madison, Wisconsin, with the National Hardwood Association in '23 was the reason for writing you recently. I feel that in the one short day spent there I learned more of the lumber business than in all the twenty years I have been in it."

Wonder what he would have said had he taken one of our courses!

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DISTRICT 1 - NORTHERN DISTRICT

Much Forest Planting Done During Year: About 3,500 acres of mountain slopes denuded by forest fire in North Idaho and Western Montana were replanted with timber-producing tree species during 1924, according to reports recently received by the District Forester at Missoula. Of the total area planted, 2,000 acres were on the Cabinet National Forest on Deep Creek near Heron, Montana; 1,000 acres on the St. Joe National Forest on Big Creek near Herrick, Idaho; the remainder being on a number of small projects on other National Forests of this region.

Nearly 2,500,000 seedling trees were used in the work. These were raised at the Forest Service Nursery at Haugan, Montana. Western white pine formed 70 per cent of the species planted, the remainder being yellow pine, spruce, and cedar. Foresters say that weather conditions were especially good this fall for work of this kind, the abundant snowfall which came before severe freezing weather being of benefit to the young trees, which may be injured by frost heaving during cold snaps.

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Helping with the Census: The 1925 Agricultural Census is now in full swing in this District. Practically all of the Forests have the field work well started. The ability of our organization to make a thorough and economical canvass is apparent from the completed schedules and the average number of farms being covered daily. One hundred and forty permanent and 70 temporary employees are under appointment as Special Agents. Schedules have been submitted to this office for about 5 per cent of the estimated number of farms to be canvassed by this district. The canvass which is being handled by the Office of Forest Products includes 43 entire counties; 33 in Montana, 8 in North Idaho, 1 in Washington, and 1 in South Dakota.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

G. M. Granger Goes to District 6: District 2 has made another contribution to the cause of forestry, with the attendant sacrifice to efficiency and fellowship. Granger's transfer to take the wheel in District 6 was a natural thing to expect, but it leaves a gap in our ranks that is hard to fill. After sixteen years of association and faithful service in various capacities from Forest Assistant to Chief of two important branches, official relations are not broken without a wrench. Nor were his services limited to the District. His work on the Personnel Classification Board is a testimonial to his Service-wide interest. His labors there have directly benefited not only Service employees but other Departmental workers as well.

None of his duties were discharged perfunctorily but with a full realization of responsibility to his superiors and fellow members. Honest disagreements there were and sometimes we got the worst of it, but not without a display of justice. We shall miss him but our loss is gain to D-6. The blessings of the District go with him.

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H. N. Wheeler Goes to Washington: D-2 again yields to the demands of the Service for good men. Wheeler, who for almost a year has devoted himself to a project of Service-wide scope, though remaining on the roster of this District, has now formally been transferred to the Forester's office, from which he will continue his educational work through lecture tours in the East and later in other sections. Eighteen years almost without interruption, first as Supervisor and then Chief of Public Relations, have identified him very closely with the District and have fixed ties of friendship which are not easily broken. With regret, yet with not a little pride and certainly with unlimited good wishes, we say "So long."

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Wants Forest Service to Run Its Grants: With cooperative fire agreement already in effect and working well and request for cooperation in timber trespass patrol submitted, big company would extend administration to other activities. The Santa Barbara Tie and Pole Company has made request through the Supervisor of the Carson Forest for a cooperative agreement by which Forest officers would patrol their grants against cordwood trespassers, as well as for fire protection. It is understood the company is favorable also to a plan for the handling by the Forest Service of the grazing resource of its two grants, the Rancho del Rio Grande and the Santa Barbara, which together contain about 120,000 acres. The Santa Barbara grant is well along in process of exchange and the Rancho del Rio Grande is very likely property for exchange which will influence consideration of the acceptance of administrative responsibility of the Forest Service.

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Good Day for Porcupines: Ranger Heregar of the Fort Valley Forest Experiment Station recently killed twelve porcupines on one of the experiment sample plots in one day. Early this year three had been killed on the same plot, which contains 480 acres. Each year during the past five years from four to six have been shot on this area. "These rodents," says Director Pearson, "have surely done as much damage as a grass fire. Every Forest officer ought to carry a gun and train his eye to spot 'porkies'."

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Deer on the Kaibab: The effort to capture deer on the Kaibab for shipment has turned out to be quite difficult. Some trapping was done with small traps, but this did not prove generally successful and was very slow. Later a large corral was constructed with high woven wire sides. Even this failed to work in a very satisfactory manner, as the deer were very wary of entering the corral in spite of the fact that the gate was made 8 feet wide and entirely of old lumber. A small cedar stub set for the gate to swing against when open particularly aroused their suspicions. These statements are very interesting in view of the fact that many people have said the deer were so tame that you could go up to them and kill them with a club. Furthermore, the day after the construction of the large corral was finished, a heavy snow fell, since which time the deer have not been to water and the work of building has gone for nothing.

A number of animals which have been captured have injured themselves so severely that they have died, and a number of fawns which have been captured were so weak that they have not been able to stand the cold weather.

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Deer Hunting on the Wasatch: Ranger Smith reports one deer hunter on the Grantsville who had never been out before. He accompanied a party of other hunters. During the early part of the second day he played out and, deciding he had had all the hunting he wanted, camped on a rock waiting for the rest of the party to turn up and show him the way back to camp. A buck nearly ran over him and he succeeded in killing it, while some of the old-time hunters in this same party came back empty handed. He reports another case in which a person who had never hunted before saw a deer, shot at and killed it instantly and as soon as he realized what had actually taken place, he was so overcome with surprise that he fainted. It is difficult to say which was the hardest to get out, the slayed or the slayer.

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DISTRICT 5 - CALIFORNIA DISTRICT

Hern or His'n? When the Lookout fire was burning all around the Campbellville Station and Guard Apperson was dashing from the house to a tent and then to the corral putting out spot fires, he shouted to his wife to get anything she wanted to save out of the tent for it was liable to catch any minute. Mrs. Apperson promptly ran into the tent, and overlooking three guns, a phonograph, two months' supply of groceries, bedclothes, and three trunks full of wearing apparel, appeared through the smoke carrying one pair of khaki breeches.

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Aluminum Stake Markers: Supervisor Maule of the Mono National Forest has a novel method of marking numbers of lot stakes used in monumenting special use surveys of summer home sites. The standard size stakes are used and are painted white. Worn but aluminum cooking dishes are cut up with tin snips into disks about 1-1/4 inches long and 3/4 inches wide. Using a set of steel numeral dies, which make a figure 1/2 inch high, these disks are stamped with the proper numbers and are nailed to the stakes with a small headed nail about one inch long. This makes a lasting number and one that can be easily changed when necessary. The numbers can also be easily attached to the stake after it is driven into the ground.

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Another Triumph for D-5: A letter from New York City addressed to the Honest Service, San Francisco, was delivered to the District office on November 3.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Radio: Bert Julian, lookout on Muckamuck, Chelan Forest, picks up wireless messages on his radio set from as far east as Annapolis and Cavite, P. I., to the West. To date he has not picked up Australia, but has hopes of adding it to his long distance records. One of the peculiarities of picking up messages from the Philippines is that they are dated one day ahead of our time. Another point is that messages come in from the east strong with the morning light, indicating that the light waves assist the sound waves when traveling together. Other times of the day it is almost impossible to get results from any distance while the sun is up.

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In Sympathy: The following message was sent to Mrs. Henry C. Wallace, Washington, D. C., on October 25, 1924, with a floral wreath from the North Pacific District:

"IN MEMORY OF HENRY C. WALLACE, WHOM WE HONORED AND RESPECTED AS OUR CHIEF, AS A MAN, AND AS OUR FRIEND."

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A Rolling Stone: At one fire on the Siskiyou last summer, a rock weighing about 100 pounds rolling off a steep mountain side at a high rate of speed struck one of the fire fighters and knocked him out. It was thought that he was all broken up and nearly killed and a doctor was rushed out from Grants Pass. However, the lad soon revived and was not badly hurt.

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DISTRICT 7 - EASTERN DISTRICT

Snakes on the Nantahala: Fire control on the Nantahala has led to the opinion by some that snakes are becoming more plentiful; by others that they are becoming less plentiful. Be that as it may, Forest Ranger Alexander contends that snakes are at least plentiful. (By the way, Alexander does not drink moonshine in large quantities.)

Recently while negotiating a perpendicular cliff with the aid of some poison oak vines for handholds, in connection with a reconnaissance of a 9-foot standard and somewhat snakelike road, he met a full-grown and able-bodied rattler traveling the same general course but in an opposite direction. Due to topographic difficulties the only possible line of travel necessitated the snake passing Alex's nose safely and with three inches to spare.

Alex's nerves recovered gradually and were considered normal when, a few days ago, while engaged in marking a Spanish oak of doubtful merchantability, he noticed a determined tapping on his bootleg in fair imitation of the continental code, accompanied by a buzzing sound which further substantiated the hastily-drawn assumption that a sending station was located in the neighborhood of his feet. After spending the standard amount of time in properly designating the tree for removal his attention was directed to a newly discovered dispatching station which proved to be the same or another rattler, very large and very active, working frantically at both ends with a number 10 boot firmly planted on his middle.

Aside from these incidents and his encounter with his pet dog that suddenly went mad and tried to bite him, Alex reports everything quiet on his district.

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Service Bulletin
U. S. FOREST SERVICE
(Contents Confidential)

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STABILITY VS. MOBILITY

By Leon C. Hurtt, Nezperce.

Mr. Guthrie's discussion of "Mobility" in the October 20 issue of the SERVICE BULLETIN seems to call for the following comments from my viewpoint.

Has it not been the aim of the personnel officers of the Forest Service even before formal reclassification was effective to go as far as possible in placing more capable or experienced men in the important jobs, and vice versa? Square pegs have been shifted from round holes as rapidly as the misfit could be detected. It is not clear to me why reclassification per se should necessitate more frequent transfers in the future. Indeed, after the first readjustments are effected and the personnel more stabilized, as seems reasonable to hope will be the result, it would appear that less frequent rather than more rapid transfers might be expected.

If effective PR work is so important as we have been told, and Mr. Guthrie should be in a position to judge as to this, then any theoretical loss through assignments in excess of three years should be more than counterbalanced by the added confidence in and respect for the local officer and his greater influence and effectiveness. Few men, even though they are gifted with industry and personality above the average, are able to gain as fully the confidence of the public and familiarity with the job inside of three years as can be done in a longer assignment. This holds true for a public officer as well as professionals or business men. Professional men as well as business concerns frequently capitalize and are able to sell for large sums their good will. Is good will of less importance fundamentally in Forest administration than other professions or businesses? Rapid changes of managers do not promote building of good will in the Forest Service or out.

It seems to me that any effort to predetermine the period of assignment based primarily on three years or any other time limit is fundamentally unsound. Advancement via transfers regardless of time limit is another thing entirely, and such transfers are usually welcomed. If the bogy of getting in a rut on the same job is a real one, a detail to another Forest for special work or to the District Office offers opportunities for broader experience and for climbing out of the rut which might, it seems, go a long way toward meeting the situation. Have details and special assignments instead of forcible transfers based on a time limit been fully developed as a means of avoiding ruts?

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TRAINING FIRE COOPERATORS IN DISTRICT 7

From a letter by Supervisor Sears (Natural Bridge)
to the District Forester

We have completed a series of seven warden training camps, which have been held for one day each in various parts of the Forest. This means of training was tried this year rather than an attempt to collect just our guards and regular force at one point for the whole Forest. All of our regular force had been at previous camps with the exception of one lookout man, and it was my desire to carry our instructions to as many wardens as possible.

The lot of "principal speaker" fell to me in all of these camps with the exception of one held in Bedford County where Assistant Supervisor McNair presided. The program consisted of a talk by the Supervisor and District Ranger, explanation of our fire plan and procedure, standards for get-away and travel time, time keeping, transportation facilities and also some general information in regard to the importance of fire protection from the angle of receipts, roads, and general community welfare.

A typical fire camp was established at each meeting with either a shelter half or the use of a Forest Service camp building, the six-man cooking outfit was put in service and one or two meals served following exactly the menu contained in our six-man emergency rations outfits.

A sample of each kind of fire tool was supplied, its use explained, and each warden given a chance to try out each tool in actual practice of line construction. No fires were kindled but each man at least became accustomed to the feel of each piece of equipment in his hands.

Organization maps of each warden district were supplied showing communication, travel and detection systems and each warden instructed as to the vital points of the organization in that particular District. Many of the wardens brought a member of their fire crews with them, and a number of interested citizens not a part of the regular fire crews were present. Seven meetings were held and a total of 161 men attended.

In addition to these meetings the wardens themselves of the Montebello District initiated another meeting which was held October 25 on Back

Creek in Augusta County, the heart of the incendiary spirit in that District. This was done at their own volition from the desire to eradicate the spirit of lawlessness in that section. Ranger Watts was present, but no other Forest Officers, as I thought best to let this meeting appear as a typical wardens meeting, planned and carried out by the wardens themselves.

The cost of these meetings outside of the Forest Officers' time has been less than a simple Guard camp would have been, as the wardens were glad to attend without pay for their time, and it is believed that we have succeeded in putting enthusiasm into our organization that could not have been accomplished in any other way.

(Note.--"Warden" is the designation given to citizen cooperators on the Southern Appalachian Forests. It is in conflict with State and county fire and game wardens, but it came into use in 1913 and has stuck.)

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A STATEMENT BY R. T. FISHER, DIRECTOR, HARVARD FOREST

Thirty years cover the total age of American Forestry. In that period only the old-timers can wholly appreciate how high in achievement and promise the profession has climbed. In the old ignorant and scornful days the forester almost foreswore his ideals lest he be called a foolish visionary. Now, not only the unmistakable demands of the future, but the very business needs of to-day require him to be a man of vision. Timber is not the only one of the natural resources by which we live that is nearing a predictable end, but it is one of the few that is replaceable, and its immense influence on our standards of living no longer has to be proved. Where once - and not so long ago - the question was where to buy stumpage, the question now is how to grow it.

From now on we are going to be asked to produce timber crops. We must bring our silviculture out of hiding and put it to work. Let us be sure - for the sake of our jobs - that it will work, but let us be sure also that we know its wider meanings. For the true forester it is not a set of immediate prescriptions and expedients, however practical they may be; it is a minute and growing knowledge of the life of a particular forest, its past, its future, and the ideal of composition and productiveness that is always obscured by the conditions of the present. It means more and more insight into the working of those natural factors that are lasting, like soil and water, and that may be in large part controlled by the forest itself. Finally, it means a long look ahead to all the human uses that the ultimate forest may fulfill. It is the exercise of this kind of vision that in the years soon to come will make the forester all the better a business man, and that makes his profession one of the most rewarding in existence.--From Pennsylvania Dept. of Forests and Waters.

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DISTRIBUTION OF ROAD AND TRAIL FUNDS

By G. H. Lautz, Washington

The following tabulation shows the amount of 10% Fund made available for roads and trails from the Fiscal Year 1924 Forest receipts, the amount transferred this year to the States represented by 25% of the same receipts and the total 10% Fund made available July 1, 1924, since the first appropriation in 1908:

State	10% Fund		25% Fund
	F. Y. 1924	Total to 7-1-24	Fiscal Year 1924
Alabama	$ 70.95	$ 429.43	$ 177.38
Alaska	12,205.87	92,475.95	30,514.67
Arizona	37,685.76	442,052.73	137,328.72
Arkansas	6,572.07	60,532.45	16,430.16
California	124,254.22	731,889.42	310,635.55
Colorado	35,794.51	426,843.29	89,486.28
Florida	2,374.77	20,504.71	5,936.92
Georgia	1,030.19	4,403.86	2,575.48
Idaho	52,650.50	519,555.21	131,626.24
Kansas	-	1,867.27	-
Maine	288.59	1,252.71	721.49
Michigan	11.94	802.71	29.85
Minnesota	2,493.33	17,050.77	6,233.33
Montana	33,114.70	421,505.60	82,786.75
Nebraska	1,117.75	12,929.94	2,794.38
Nevada	10,186.74	110,568.87	25,466.85
New Hampshire	3,637.89	16,025.08	9,094.72
New Mexico	19,053.78	259,024.37	49,024.00
North Carolina	3,711.69	20,006.16	9,279.21
North Dakota	-	45.75	-
Oklahoma	758.79	6,054.66	1,896.99
Oregon	70,777.51	513,673.51	176,943.73
Pennsylvania	100.00	100.00	250.00
Porto Rico	-	3.70	-
South Carolina	162.57	537.51	406.44
South Dakota	9,773.99	87,623.57	24,434.98
Tennessee	1,388.38	9,915.00	3,470.95
Utah	23,276.23	266,240.82	58,190.57
Virginia	3,793.36	18,247.07	9,483.40
Washington	35,617.38	282,263.69	89,043.44
West Virginia	369.39	2,055.97	923.49
Wyoming	28,467.07	244,667.82	71,167.66
Total	$520,739.92	$4,591,149.60	$1,346,353.68

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WASHINGTON NOTES

A "Piney Woods" Motion Picture, showing forcefully the injuries to timber and grazing caused by burning over pasture lands in the Piney Woods, is under preparation by the Department Office of Motion Pictures. This picture is got out by the Bureau of Animal Industry in cooperation with the Forest Service and covers both grazing and forestry. A roaring forest fire, a farmhouse in flames, logging, hunting, improvement of livestock and pastures, comedy, near-tragedy, and romance are all interwoven in the 133 scenes of "The Green Barrier," a story of the Piney Woods.

It has long been the custom in the portion of the South known as the Piney Woods to burn off the dry grass in fall or spring. This practice, however, has been proved to be unwise. Burning prevents the seeding of valuable pasture plants, such as carpet grass and lespedeza. It also damages or destroys young timber and drives out birds and other wild game.

The new motion picture tells in story form how an old-time farmer through local happenings becomes convinced that pasture burning does more harm than good.

"The Green Barrier" derives its name from a dramatic scene in which a woman is overcome by a forest fire and falls prostrate on carpet-grass sod. True to its fire-resisting qualities, this grass stops the fire and saves her life. Most of the scenes were photographed in Mississippi and Louisiana. The new film is now in process of preparation and will be released some time this month through the customary channels.--H.R.K.

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FOREST PRODUCTS LABORATORY

Hardwood Newsprint: The possibilities of using hardwoods for newsprint were shown to those invited to the conference on Utilization of Forest Products, recently held in Washington, by the programs which were printed on paper made from black gum. Nine-tenths of a cord produce one ton of this paper, as compared with 1.2 cords of spruce required to produce a ton of newsprint by the usual processes. Similar satisfactory results have also been obtained with poplar and birch.

This product and the process by which it was made are still in the experimental stage. Nevertheless, the high yield and the excellent natural color of the pulp give promise that such broadleaf woods as aspen, birch, beech, maple, black and tupelo gum, and cottonwood may be used profitably in the manufacture of newsprint to supplement the rapidly diminishing supply of spruce, which is at present practically the only species considered suitable for newsprint.

Many of these broadleaf woods have only limited uses as lumber, hence their utilization for pulp would be an important advance toward conserving the timber supply.

The Rattle-Water Snake: A new kind of snake, the "rattle-water variety," was recently described in the Madison Journal.

The news item, which originated in California, told of the fearful damage being done in one region by water snakes which are destroying hundreds of fish, even snatching them from the fishermen's hooks. Water snakes that eat fish are common in California but the "rattle-water" snake sounds like a California invention.

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FOREST EXPERIMENT STATIONS

Light Burning in Australia: The Australian forester has light burning trouble as well as we. In a foreword to an Australian reprint of the California Forestry Committee's report, the Conservator of Forests states that while the possible damage to mature eucalypts may be less than in the case of pine trees, as eucalypts are not easily killed by maltreatment; nevertheless it is evident that no burning so far studied has failed to show damage to mature timber greater than that noted by the casual observer. Insects following fires are also important enemies of the Australian forest but, unlike the bark beetle attack, most of the insects are pin-hole borers which destroy the wood.

The Australian forester also recognizes an impoverishment of the soil following repeated fires so that the parched, sterile condition of the present day has come to be regarded as a natural soil. Repeated burning has also slowed up the rate of growth of the important timber trees. Most of the damage by light burning is to reproduction and in the eucalypts the damage to the sprouts makes impossible the production of straight and useful mill logs. Most of the "bush" near the centers of population has been burned over as frequently as it is possible for it to burn. Although the resulting reproduction might appear satisfactory to the logger, it presents to the forester a most difficult problem. It is useless if left, and if cut down a coppice forest instead of a seedling forest will be the result.

The Australians believe that complete fire prevention is impossible in practice, though controlled fires play an important part in silvicultural operations. The term "fire control" has been adopted locally rather than fire prevention.--E.N.M.

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DISTRICT 1 - NORTHERN DISTRICT

Striking Examples of Erosion: The most striking example of erosion following a forest fire that has been noted in District 1 appeared during August, 1924, on the St. Joe River in Idaho. A fire covering some 2,000 acres in this locality made a very severe burn over an area which had previously been burned in 1910. The 1910 burn killed a very heavy stand of timber, very little of which was destroyed by the fire. A dense stand of brush, herbaceous vegetation, and reproduction followed the 1910 fire, and established a very complete vegetative cover over the area. The 1924 fire destroyed this cover and burned up a very large part of the dead timber left by the 1910 fire. Approximately a month after the 1924 fire, a heavy but not a torrential rain occurred. From the upper slopes this rain gathered the ashes and lighter materials. Gaining velocity as the run-off descended, it picked up coarser material, and finally collected rocks and logs in its path. In all probability thousands of tons of material were removed from the area, leaving it stripped clean to mineral soil, and in many places where the soil was shallow to the underlying rock. On the day following the rain the St. Joe River below the burned area was a dull chocolate brown from the load of sediment which it carried. The effect was noted a day or two later farther down the river. A heavy coat of silt was deposited in all of the places of slack current. Fishing was out of the question for two or three days, but whether or not any fish were killed by the deluge of mud is not known. Heavy slides of dirt, rock, and dead timber came down several of the steeper gulches, blocking the river channel for one fourth to one-third of the way across. In the burned area the soil which was not washed off apparently absorbed very little water, except where pools collected in small depressions.

In the surrounding 1910 burn still covered with brush and young growth there was no visible evidence whatever of erosion. The streams coming from such areas remained perfectly clear, and much of the rainfall was evidently absorbed by the duff and surface soil.

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DISTRICT 3 - SOUTHWESTERN DISTRICT

Bug Boxes Hatch Beetles: Experiment in identification of pine beetle is successfully carried out. Dr. W. D. Edmonston of the Bureau of Entomology made an examination of an insect infestation near the Tajique Ranger Station on the Manzano in the fall. From infested western yellow pines he collected specimens of bark which were left in the District Office of Forest Management. Mr. Randles built two incubators of cardboard boxes about 5" x 7" x 4" with cheesecloth covers into which the infested bark specimens were put. The boxes have been kept in the warm room and now after about seven weeks, adult beetles have emerged. Under natural conditions, the insects would have remained in the dormant stage until spring when upon changing to beetles, according to their life habits, they fly to new trees.

These new trees are attacked by the beetles boring through the bark to the cambium where galleries are excavated in which eggs are deposited. In due time the eggs hatch into larvae which eat their way into the bark become pupae and finally develop into adult beetles thus completing the cycle. Sometimes more than one cycle is completed during the warm portions of the year. Microscopic examinations of the mature beetles confirm the belief of Dr. Edmonston that the Manzano infestation is Dendroctonus Barberi. The bug boxes are being watched with interest as it is now believed that, barring accidents, Mr. Randles will obtain a prolific hatch.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Trespass of Wild Horses: Eliminating wild unpermitted horses from the Forest may appear to the unexperienced Forest Officer an easy task; but let him make the attempt and he will immediately find that he is undertaking to solve one of his most difficult problems. This was fully realized by Rangers Folster, Betenson, and Albertson, in their efforts to remove the unpermitted horses from Districts 7, 8, and 9 of the Fishlake Forest during the latter part of September. The first big job encountered was the task of gathering these horses and placing them in a corral and cutting out the permitted horses. This was not accomplished without rough and fast riding, since some of the horses had never before been in a corral and were not accustomed to being handled.

After one week's riding, during which the endurance of not only the saddle horses but the men was fully tested, 48 unpermitted horses were corralled and the process of making disposition of them was started. Three owners from Wayne County appeared on the ground and redeemed five of the horses by paying the required trespass fee of $5 per head. The remaining 43 head were driven to Salina and ten head more were redeemed by owners making full settlement of the trespass fee. So far the work had progressed very satisfactorily, but Mr. Folster, the Ranger in charge, was now confronted with the question of disposing of the remaining 33 head of horses, since the Estray Poundkeeper refused to take these horses and collect any Forest Service trespass fee unless Mr. Folster would guarantee to pay for the cost of feed and care of each horse while being kept in the pound, if the sale of each horse was not sufficient to pay such costs. This Folster felt he could not consistently do, but he was determined to take some action that would prevent these horses from again trespassing on the Forest. He therefore induced the owners of 20 head of horses, considered worthless, to give him a bill of sale and waive all right, title, and interest to these horses. The Fishlake National Forest Woolgrowers Association was then induced to pay the trespass fee of $2.50 per head, with the understanding that Mr. Folster would assist trappers employed by the Biological Survey and the State of Utah to distribute these horses on the range as poison bait for predatory animals. Since it was evident that no trespass fee could be collected for the unauthorized grazing on the Forest of the remaining 13 head, they were turned over to the pound keeper; the county, in accordance with the Estray Pound Law for Utah, assuming all risks as to the collection of the costs for impounding these horses. Ranger Folster now reports that these horses were sold for a sufficient amount to pay all costs and that the county netted a small profit for the transaction.

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DISTRICT 5 - CALIFORNIA DISTRICT

Your Move, Harry! Our honorable District-Law-Officer and Assistant-to-the Solicitor, Harry P. Dechant, recently wrote a grazing trespasser as follows: "I find from the facts that at least 17 head of your horses grazed on the National Forest without permit for approximately 18 months, the damage amounting to $108.50. This letter is written you to give you further opportunity in which to settle the case, etc.".

In answer to this communication the trespasser replied: "I no how long my horses were on Forest. They were in the forest 6 months instead of 18 mo. Now if you will send a right bill I will pay it. But if you think that you have $108 coming - come and get the horses."

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They Have 'Em Trained on the Santa Barbara: The following note was found under the door at the Santa Ynez Ranger Station recently:

"Mr. Ranger:

Undersigned stopped for permit for camp fire. Found you gone. Don't know what to do. Have gone to the Dam to camp over night. Six in party. No dogs. No fire arms. Buick six, 21 Model, License No. 500-716. Will light fire at camp site of Dam unless I hear from you.

Yours truly,

John B. Sure."

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Monterey Artists Resent Sawmill's Buzz: Unless the law intercedes, standard similes of modern literature may be subjected to revision. Here is a sample of what readers may expect:

"Screeching like a band saw in its moment of labor."
"Flying like chips from a 12-inch jointer."
"Like the monotonous drone of a lazy ripper."
"Went through the enemy like a cross-cut through a shingle."

And all this because a sawmill is setting up foundations in Aguajito Mesa, the artists' residential section of Monterey. The literary colony has petitioned the mayor and the city council to restrict the building in that area. Aguajito Mesa was once Monterey's important residential section. But that was before the State Capitol was moved to San Jose. Then the quaint adobes on the Mesa tumbled down. A few years ago Governor Morris purchased one of them and rebuilt it. Other artists followed until it has now become an exclusive literary colony.

* * *

DISTRICT 6 - NORTH PACIFIC DISTRICT

Promotion and Transfer: Supervisor W. F. Ramsdell of the Whitman was promoted and transferred to the Office of Forest Management as assistant to F. E. Ames during the past summer, taking the place made vacant by the transfer of T. T. Munger to the Experiment Station.

Albert Helps in City Fire Prevention: Ranger Albert Wiesendanger gave talks at all high schools in Portland during Fire Prevention Week, October 5-11, at the request of the City Fire Department. This is an annually observed week throughout the United States to impress upon city dwellers the importance of reducing the enormous loss of property in towns and cities. President Coolidge issued a special proclamation for October 9, as National Fire Prevention Day, which date is the anniversary of the great Chicago fire. During 1923, 15,000 lives and property valued at $500,000 were lost in fires in towns and cities.

Dutton to Take Census: Under a cooperative arrangement with the Bureau of the Census, Grazing Examiner Walt L. Dutton will have general supervision for the Forest Service of Agricultural Census work in Oregon and Washington this fall and winter.

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Supervisor Billings of the Wallowa has found the secret of getting the attention of the visitors at the county fair. The Forest exhibit includes a fire finder and the visitors think it is a roulette wheel and crowds gather around waiting to bet on it!

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DISTRICT 7 - EASTERN DISTRICT

What's the Answer? Ranger McKee of the Florida National Forest is wondering if Supervisor Bishop's failure to secure from his cooperators a heater and two tons of coal for the Kinzua lookout tower, nearing completion on the Allegheny Forest, was due to an oversight. Or did the Supervisor in a sudden attack of modesty decide to overlook the omission of these donations?

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Service Bulletin

U. S. FOREST SERVICE

(Contents Confidential)

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YOU'LL BE SURPRISED

By H. T. Gisborne,
Priest River Experiment Station

Messrs. W. I. Hutchinson and Miller Hamilton, in the October 6 and October 27 issues of the SERVICE BULLETIN, have just given us the scare of our lives concerning tailor-made cigarettes as destroyers of our forests. Mr. George C. Joy, Washington State Firewarden, also unblushingly advocated before the recent Pacific Logging Congress a Federal law prohibiting the manufacture of the lovely tailor-made. It would be fine, if we were dead sure we were right, to get behind a movement for the prevention of forest fires started by tailor-mades. But how many of us have actually seen a single forest fire started by a tailor-made cigarette? How frequently is the "cigarette fire" classification used as a receptacle for fires whose cause cannot otherwise be explained? How sure are we that it was a cigarette, and not the match used in lighting it, which was the cause? If we are sure it was not the match, are we equally sure it was not a pipe heel? If we are dead sure it was a cigarette, might it not have been a hand-rolled product? Why jump with such terrific force on the altogether enjoyable tailor-made?

Within our own circle it may not be amiss to call attention to the possibility that tailor-mades are not quite as dangerous as some people would have us believe. S. B. Show, R. H. Weidman, and the writer held the conventional theory until they made a few actual tests. The tests were limited by Show's refusal to supply more firebrands unless the Fiscal Agent would reimburse him! The results may be of interest.

Test No.	Material and its condition	Wind miles per hr.	Minutes spark exposed to duff	Result
	Lighted half cigarettes (tailor-mades) dropped on samples			
1	Oven-dry fir-larch duff	0	7	Cigarette burned out without igniting duff
2	" " Yellow pine "	1	6	ditto
3	" " fir-larch "	6	6	"
4	" " " " "	6	2½	"
	Glowing pipe heels dropped on samples			
1	Rotten wood with 7% moisture	0	1	Material ignited
2	Oven-dry fir-larch duff	4	1½	" "
3	" " " " "	5	1	" "
4	White pine duff, 6% moisture	6	2	" "
5	Oven-dry yellow pine duff	0	4	Pipe heel burned out without igniting material
6	White pine duff, 6% moisture	0	2	ditto
7	Rotten wood with 7% moisture	0	3	"
8	Oven-dry yellow pine duff	1½	2	"
9	White pine duff, 6% moisture	1½	9	"
10	Oven-dry yellow pine duff	2	3½	"

It was also found that blazing matches would ignite duff whenever that material had a moisture content of less than 10%, even with no wind to assist. With a slight wind a match may be effective in igniting duff having as high as 13 per cent moisture. With wind velccities of over 10 miles per hour, the flame of the match was extinguished before it could ignite the duff.

When you knock out a glowing pipe heel, the coal usually breaks up into rather small sections. In the woods these small coals snuggle right up against the dead leaves and even get under some of them so that the heat liberated is almost all effective in raising the temperature of surrounding materials. Flip a hand-rolled cigarette and notice how the coal breaks off easily and often falls apart.

Drop or flip a tailor-made cig in the woods, however, and notice how the glowing stub usually comes to rest intact on top of the duff. The heat rises straight up or is blown away by the wind. Lying on top of the materials the stub will nearly always burn out without breaking up. It does not get into such close contact with inflammable materials and its heat is largely noneffective in ignition. Try it. You'll be surprised. But remember to PREVENT FOREST FIRES - IT PAYS.

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A CITATION

"In connection with the death of my son, Harold B. Sparks, which resulted from a fall from Kaleetan Peak on Sunday, September 14, 1924, I wish to especially commend the supreme courage of Forest Rangers B. C. Saterbo, C. M. Pumfrey, and W. K. Garrison of the Denny Creek ranger station, in their almost superhuman efforts to bring out the body from a most inaccessible location where it rested. They exhibited a fine spirit of helpfulness in a time of extreme need and I feel that they are entitled to special mention for meritorious service in the performance of an act of unselfish devotion to a fellow man; and I take this opportunity of bringing the matter to your attention in the hopes that due credit through official channels may be given these worthy rangers."--Letter from W. A. Sparks, U. S. Post Office Dept. to Supervisor Weigle of the Snoqualmie.

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REFORESTATION BACKED BY MILLION DOLLAR CORPORATION

By Geo. E. Griffith, D-6

A million dollar corporation for holding for reforestation purposes extensive cut-over timberlands in the State of Washington has recently been organized in Tacoma, Wash. The new corporation will be known as the Weyerhaeuser Logged-off Land Company. C. S. Chapman, formerly of the Western Forestry and Conservation Association and now forester for the Weyerhaeuser interests, will be active manager of the new company. All of the stock will be held by Weyerhaeuser interests, since no immediate profit is anticipated from the venture.

This is the first attempt by private capital on a large scale to solve the reforestation problem in the Pacific Northwest. One of the first activities of the new company is to be a scientific survey of logged-off lands. More than 150,000 acres will be classified according to their value for agriculture or a second crop of timber.

The corporation is empowered to acquire logged-off lands, engage in reforestation, land clearing, farming, stock raising, and the conduct of experimental and research work as a means of making productive the vast areas of land now logged off and idle. All of these activities are to be energetically carried forward. Under "Chap's" capable direction, the movement is certain to mean much for the future of forestry in the Northwest.

In discussing the project, General Manager Long said, "Under our proposed plan we hope to perpetuate the timber resources of the State, which will undoubtedly result in the formulation of a State policy protecting the future of this leading State industry."

About a year ago the Weyerhaeuser interests donated 50,000 acres of cut-over lands as the start of a system of State Forests.

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THE "BROOM-TAIL" PROBLEM

By John D. Jones, D-3

Since the days of the early Spanish explorers, the southwestern ranges have been infested by large numbers of wild horses and burros. They have been a troublesome proposition on the National Forests from the day the Forests were created. This is particularly true in the Southwestern District, where there are yearlong ranges and the horses can make a continuous living. How to dispose of these horses, which consume a vast amount of forage each year, is one of the big problems of Grazing. Because of the danger of killing branded horses, or valuable horses that might become accidentally mixed with these bands, as well as there being no legal authority, it has not been practicable to kill indiscriminately. To round up and drive the wild horses off of the range is an expensive operation and does not usually result in their final disposition, as they promptly return to the ranges where they have been accustomed to roam. With the fencing of a number of the Forest boundaries, it was felt for awhile that this problem could be solved by placing the horses outside. This measure has not met with entire success, as frequently they have breached the fence and returned, or some stockman (to relieve his own range of the burden) has breached the fence for them. If they are rounded up and held in a pasture for disposition under the State laws, it not only involves a great deal of time and the use of valuable pasture, but owing to the fact that these horses have no sale value the State sanitary boards will not assume jurisdiction over them. The wild horse nuisance has been particularly perplexing during the past three years of drought, when the ranges were already overtaxed to carry the regularly permitted stock. Some of the Forests, however, have recently reported encouraging progress in solving the problem. The Coronado states that several bunches of unpermitted horses have been rounded up and removed from the range and more are expected to follow. This was done by local stockmen who had permits for the range. The stockmen reason "that if they have to pay $1.50 per head as a grazing fee, they don't want any broom-tails eating up their grass." Evidently the raise of rates, due to range appraisal, has had a good effect in this instance, since forage that is too cheap is not appreciated and likely under the old rates the "broom-tails" would not have been removed. The Crook Forest reports that similar results are being secured through the Mt. Graham Cattle Association, which was organized as a result of the efforts of Rangers Rowley and Sowell. This association began immediately to organize a round-up to remove the unpermitted horses. One of the permittees on the Crook, who owns a large number of "broom-tails," has killed over 100 head in order to relieve his range and waterholes, which at present are hard hit by the drought. It is believed that if aggressive action is taken all along the line the National Forest ranges can be relieved of this useless burden.

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WASHINGTON NOTES

Carter Talks on Alaska: On December 3, Mr. Carter gave an illustrated talk on the Alaskan Forests to members of the Washington office. This was the third of the present series of Family Meetings which are to be held monthly until June. In one hour Mr. Carter crowded in a wealth of description and information concerning the resources, topography, and other important characteristics of the Chugach and Tongass Forests. He also touched upon their present relation to the industries of Southeastern Alaska and their prospective economic importance to the nation. Those at the meeting were convinced that a Forest officer up there must of necessity be something of a deep sea salt and mountaineer as well as have the other requisite qualifications. Even so, the life of a seafaring forester must be great, especially in Alaska.--H.I.

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Bulletins Wanted: The Washington office is in urgent need of copies of: Department Bulletin 244, "Life History of Shortleaf Pine"; Department Bulletin 308, "Shortleaf Pine: Its Economic Importance and Forest Management"; and Department Bulletin 1119, "Lumber Cut of the United States, 1870-1920."

The supply of all of these publications is exhausted, but owing to the limited funds available for Department printing it is not possible to have them reprinted. Please return any extra copies, either personal ones or supplies in District and Forest headquarters, to the Forester.

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FOREST PRODUCTS LABORATORY

Using Wood Wastes for Pulp: "Why aren't the poor species and the wood wastes used for pulp?" is a question frequently asked. Apparently the chief reason is because of the high cost of bringing the materials to the mill or in shipping the products to the market.

The pulp-wood species in the Pacific Coast States, with usually limited lumber values, would seem to offer specially good opportunities for utilization. Markets, however, are largely in the Northeast, which in 1922 consumed 81 per cent of the total pulp wood used in the United States, while the Pacific Coast used only 7 per cent. Freight costs on pulp wood are constantly increasing in the Northeast as the supply of timber decreases; in 1922 the cost per cord f. o. b. the mill was $17.55 in the Northeast and on the Pacific Coast it was $10.20. If the differential in pulp-wood costs becomes sufficiently great to take care of transportation on the finished product, due allowance being made for any small difference in cost of manufacture, the eastern market will be open to the western manufacturer. Transcontinental freight rates on paper are also a factor in this development.

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Eggs Now Safe from Taint of Straw Odor: No contaminating taint in eggs need be feared now when strawboard prepared according to Laboratory methods is used for the egg case.

Naturally the cooperators are enthusiastic over the outcome and are making arrangements for a commercial demonstration of the results obtained.

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DISTRICT 1 - NORTHERN DISTRICT

Grasshopper Glacier on the Absaroka: A grasshopper glacier located in the Crazy Mountain division of the Absaroka Forest has but recently come to the attention of recreationists in this vicinity. It is located at the extreme head of Cottonwood Creek, a tributary of Shields River. Thousands of the hoppers are to be seen imbedded in the ice. A crevice twenty feet in depth and four feet wide traverses the lower end of the glacier where the grasshoppers can best be seen. At the approach to the glacier an odor from the hoppers can be noticed where many of them become thawed from the ice during the hot days of summer.

The hoppers appear to be no different from those existing at the present time, and it is not my belief that they were imbedded in the ice at a certain period of time. I visited the glacier during the month of August and at that time live hoppers were observed on the surface of the glacier. It is my opinion that the hoppers alight on the glacier most any year, become there chilled, and when the snow falls they are covered over. Perhaps the snowfall during that particular winter will be heavy and as a result does not melt entirely away the next summer. The new snow will become packed and hard and the hoppers will become imbedded and remain there hidden.--L.P.McK.

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Hemlock - The Bitter Truth: In Pennsylvania they plant 'em to grow into a future timber supply, because they are tolerant of heavy shade, make rapid growth in early life, and are very hardy under trying climatic conditions. In District 1 we give 'em away to get rid of 'em, or we girdle 'em to form a future fire trap - I mean hemlock trees. All of these things done to hemlock trees are "forestry." True, the hemlocks in Pennsylvania are a different species than ours, but not one forester in ten could tell the difference in either trees or the wood if they saw them side by side, or had them made into a box or a newspaper. I wonder if all of us are doing the right thing to hemlock trees.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

Municipal Cooperation in Controlling Xmas Tree Industry: The Christmas tree business on the Pike is being stimulated and the cause of forestry generally in the State of Colorado is being advanced by the keen interest taken by the city of Denver in the production of Christmas trees regulated so as to avoid destruction to the forests. A movement was started about a year ago to abolish the use of Christmas trees because of the serious abuses in connection with their production as a commercial product. Interested organizations and the city itself, however, have listened to the plea of the Forest Service that this decidedly worth while custom could be continued in Colorado, not only without harm to the forests of the State but with an actual benefit to them if the trees were secured with the proper regard for forestry principles. The result was the appointment of a committee in the Chamber of Commerce in Denver which has put on a very energetic publicity campaign in favor of the unsymmetrical tree which, by its very appearance, presents evidence of the fact that it was cut for the improvement of the forest stand. City officials have prepared a tag similar to the one in use by the Forest Service which is being offered to all private landowners who are willing to insist on the observation of forestry principles in the cutting of trees from their land. This is a practical measure, since all Christmas tree dealers in Denver are required to take out a Christmas tree vender's license on which is stated the location of the land from which the trees are taken. A number of dealers who have hauled trees into the city have been stopped on the road for the purpose of checking their licenses. Legal action has been taken in the case of one man who secured trees illegally and a very stringent procedure is being followed in the issuing of tags and in learning from dealers the source of their trees to check up on the methods which are being employed in cutting them. It is a big responsibility to be undertaken by any city and is doing a great deal to preserve the use of Christmas trees in this region and to lend weight to the Forest Service appeal for the observance of forestry principles in the handling of private lands.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Wingfield Secures Twain Cabin for Nevada: Mark Twain's old cabin in which the famous humorist lived when he was a prospector at Aurora, Nevada, was moved to Idlewild in Reno recently.

The cabin has been placed in the north section of Reno's park in a large clump of willow trees where a rustic fence and a typical miner's stone gate and walks are being constructed. Moving of the cabin had been delayed owing to the clearance of title and other legal tanglements.

Through the cooperation and courtesy of George Wingfield, red tape was cut which made possible the removal of the cabin to Reno.

A movement was started in California for the removal of the cabin to Mono Lake, where it is said Mr. Clemons camped part of each year. Just before the California committee had received final authorization to move the cabin George Wingfield was told of Reno's wish in the matter and the fact that Nevada, as the early home of Twain, was entitled to preserve his old cabin.

Not only was the cabin brought to Reno but through the cooperation of many of the old-timers in the Aurora district, the complete furnishings of Twain's home were collected and installed in the building.

* * *

Soap and Screw Holes: The personnel of the Idaho Forest, having modest and retiring dispositions, have not given publicity to a little device which they are using on their telephone extension bells in the Fire Dispatcher's office, which fills a long-felt want where an office has a number of bells and it is difficult, without trying each line, to tell what bell has rung.

A two-inch length of light coil spring is attached in an outward, horizontal position by a drop of solder to the clapper of each bell. When the bell rings, the spring is set vibrating and continues to vibrate for ten or fifteen seconds, so that only a glance is necessary to show each line that is calling.

This beats an annunciator with drops because it does not impose any additional load on the lines, as drop magnets do, and does not require resetting each time the bells ring.

Credit for this device is due Elmer Ross of the Weiser.

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DISTRICT 5 - CALIFORNIA DISTRICT

Board of Fire Review Opens Sessions in Los Angeles: The special Board of Fire Review appointed by Col. W. B. Greeley, Chief of the U. S. Forest Service, to determine the efficiency of the fire prevention methods in force on the Angeles National Forest and to formulate a stronger constructive policy for the future protection of the forests and watersheds of Southern California from the ravages of fire, was recently in session in the Federal Building, Los Angeles, for two weeks, examining witnesses and holding public hearings. Later, similar hearings will be conducted in Pasadena and San Bernardino.

The board is composed of Associate Forester E. A. Sherman, Chairman, from the Washington headquarters; H. S. Gilman, Superintendent of the San Dimas Water Company, San Dimas; Wm. Starke, Superintendent of the San Bernardino Water Company, San Bernardino; Major E. W. Kelley, Federal Fire Inspector, Washington, D. C.; Frank C. W. Pooler, District Forester for Arizona and New Mexico, Albuquerque, N. Mex.; Paul G. Redington, Chief of the California District; and Assistant District Forester Wallace I. Hutchinson, San Francisco, Clerk of the Board.

The testimony to date has been largely by Government and Los Angeles County forestry officials, who have refought before the board the fierce and gruelling battle waged against the flames of the disastrous San Gabriel fire. This is the fire which last September swept over 50,000 acres of valuable brush and timberlands in the San Gabriel watersheds of the Angeles National Forest, and cost over $300,000 to suppress. Representatives from Chambers of Commerce and other public and private organizations also appeared before the board.

The public sessions of the board were open to all persons desiring to testify or recommend means whereby the fires which yearly ravage the mountain regions of southern California may be prevented or more effectively controlled.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Introducing George E. Griffith: Although he needs no introduction to many D-6 Forest officers, this is to present him as Administrative Assistant in the Office of Public Relations, effective September 15. Griffith has been in the Service for seven years as Chief Clerk, Executive Assistant, and Deputy Supervisor on the Rainier Forest. Having had valuable experience before entering the Service in the advertising game, he became interested in Public Relations work upon the organization of the Branch and Offices of PR in 1920, and has thoroughly proven his ability along these lines. He has contributed in a very real way to the development of PR work in this District and in his new position will be able to make his ability more effective. He is an able and convincing public speaker and has made very favorable impressions before every audience which he has addressed and is in much demand as a speaker. He fills a long-recognized need for a second man in the Office of Public Relations.

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"Murder Will Out!" A sheep camp on Black Butte, Malheur National Forest, was robbed in 1909; grub, bedding, and a gun were stolen and the camp burned. The crime was connected with the cattle-sheep feud and two men were arrested but could not be convicted. All this was forgotten long ago - until August 30, 1924, and the Black Butte fire. Sweating fire fighters were startled by the sound of a shot coming from the midst of the flames and smoke. Nothing could be found as to the origin of the shot, but several men were sure they heard a rifle shot. As soon as the fire had died down sufficiently to permit investigation a search was begun. The gun stolen 15 years before had been cached under a log and the fire had caused it to explode. Some of the old-timers who were on the fire line recognized the gun.

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DISTRICT 7 - EASTERN DISTRICT

Here's the Answer: Apropos of Ranger McKee's question as to why, while we were accepting contributions for our Kinzua lookout tower, we didn't suggest that someone give us a stove and a couple of tons of coal. We are obtaining a stove by requisition, but the use of coal therein would be a bit too prosaic for the Allegheny. A natural gas pipe line passes within 600 feet of the tower and the owner has told us to make a connection and help ourselves. We are just now looking about to see who is to be given the opportunity to supply the necessary 600 feet of pipe.

Since coming to Washington for a short detail in re acquisition matters, I am advised that Ranger Conarro wrote a letter to a local pulpwood concern telling them about the tower and stating that the cooperation account was still open. The reply was that they were glad to know about the project and would we please accept the $100 check enclosed? We did.--L.L.B.

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Must Have Been a Rubber Tree: Report of injury from the Arkansas: "Piece of rock thrown from blast struck tree near where I was standing behind tree, rebounded and struck me on head inflicting three wounds. Three stitches were taken in one wound. When accident occurred I was standing behind a tree on opposite side from where blast was being put off. The tree that the rock struck before it struck me was about six feet from where I was standing."

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

Vol. VIII, No. 51. Washington, D. C. December 22, 1924.

TO ALL THE
MEMBERS OF
OUR WIDESPREAD
FAMILY, BEST
WISHES FOR

A
Merry
Christmas

W B Greeley
E A Sherman
Roy Headley
E. E. Carter
Will C. Barnes
Earle H Clapp
T. W. Norcross
Herbert A. Smith

WAR WAGED ON WOOD WASTE

By C. W. Boyce, Washington

The National Conference on Utilization of Forest Products called by former Secretary of Agriculture Wallace met for a two-day session in Washington on November 19 and 20. It was perhaps a fitting finale to the work of a great man interested intensely in the ultimate public good. In the words of President Coolidge, "The conference was the outcome of a broad forest policy which Secretary Wallace was engaged in developing and to which he contributed so much ability and energy."

The conference was opened by a characteristically terse, tightly packed speech by President Coolidge, in which the national timber problem was outlined and aggressive measures of conservation were placed before the 400 delegates representing the wood-using industries of the United States.

"One of the chief items in that problem (national timber problem) is the present appalling waste," was the President's opening broadside. "Some of this waste may be unavoidable - to a large extent it is unnecessary."

Secretary of Agriculture Gore followed the President with an address in which he emphasized the necessity of organized effort. "Joint effort alone offers a solution of the problem of how the remaining timber resources of the United States can be used most economically and effectively."

Col. Greeley presented a careful summary of the types of waste in wood utilization, indicating how and by whom this waste might be reduced. This paper prepared the way for the more detailed speeches which followed, each taking up specific phases of the wood-waste problem. Loggers, lumbermen, pulp manufacturers, and representatives of various minor and allied industries carried on the idea which culminated in the report of the Committee on Permanent Organization, the only committee functioning during the conference.

The Central Committee on Lumber Standards was selected as the organization best fitted to create the means of introducing better practices in wood manufacture and use, the committee to function under the name of "The Central Committee on Utilizing Forest Products" with an annual budget provided by the organizations represented.

The recommended program of activities was separated into two parts; the first, activities to put in practice commercial application of available knowledge; and the second, to increase available knowledge by research of the most intensive character. These recommendations were accepted by the delegates.

That there is large waste in wood manufacture was not questioned, and there was no difference of opinion as to the absolute necessity that every effort should be made to reduce it as much as possible. Those present saw the need of action to the extent of providing funds for a permanent organization. The way is now open for an aggressive program of waste reduction.

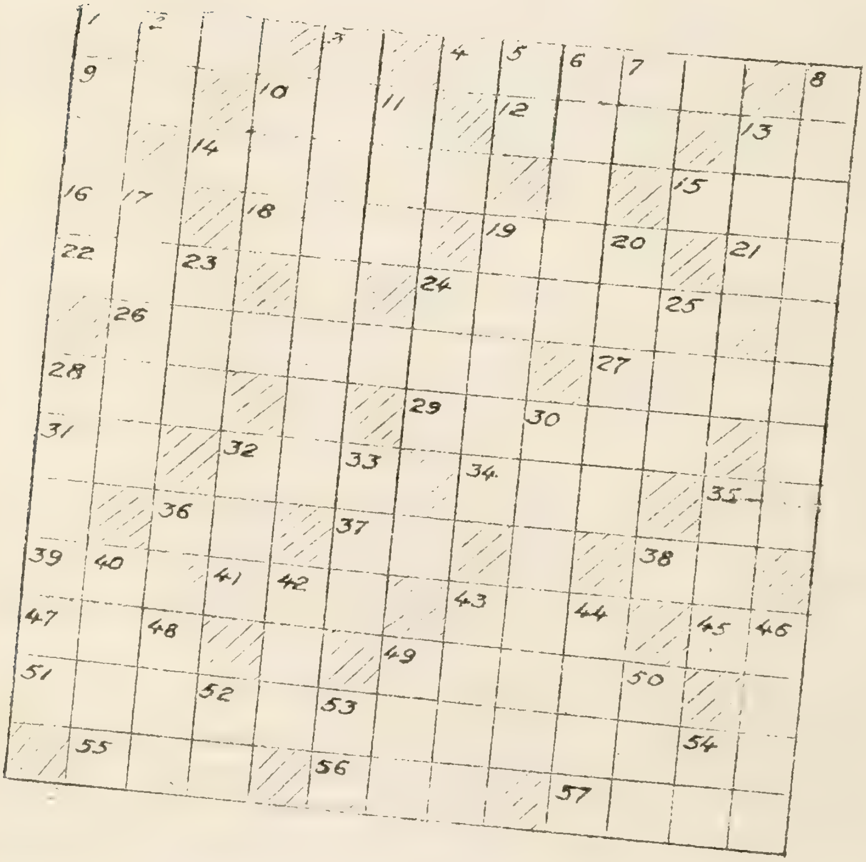
KEEPING UP WITH THE TIMES

By Bernice M. Geddes, Washington

Lest some rude person thinks that the Service Bulletin is not an enterprising sheet, the latest thing in journalism is hereby offered to Bulletin subscribers. The answer will be published in the next issue. Place your order with your favorite newsdealer FCE!

Yes, prizes will be given to the first subscriber who correctly solves this puzzle. First prize is an annual subscription to the Service Bulletin; second prize is ditto; all other prizes are likewise ditto.

Seriously, the Service Bulletin will be glad to consider contributions of cross-word puzzles. Only those containing words relating to Forest Service work will be considered, of course. Try your hands and brains! The contest is open to all members of Forest Service families.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Horizontal

1. A cutting tool used in trimming off the surface of wood.
4. What a cow wears before being turned loose on the range.
9. A familiar little adverb meaning therefore.
10. A savage of a mixed Malay-Negrito tribe. (You are not expected to guess this one, but it is thoroughly keyed.)
12. Soon.
13. Initials of a famous forester.
14. A by-product of timber sales.
15. Fluid contents of a tree.
16. Half an em.
18. Printer's units of measure.
19. What keeps the barbers busy.
21. The elder member of the family.
22. What Rangers and crews never get a chance to take when fighting fires.
24. Going forth to battle, in a poetic way.
26. Plunders, devastates.
27. Branches (Latin word - a chance for the studious ones).
28. A young plant ready for setting out.
29. What the Forest Service keeps on the Wichita Forest.
31. Civil Service (abbrev.).
32. Over (poetical contraction).
34. What strong men do when the fire jumps the fire line.
35. Exist.
36. A parent.
37. What the Governor of New York is familiarly called.
38. A preposition.
39. Behold.
41. A little child.
43. A thick viscous liquid obtained by the distillation of wood.
45. A preposition.
47. A period of time.
49. What is seen when the hood of the flivver is raised.
51. What the Forest Service is working for, and what the Clarke-McNary bill has encouraged.
55. Streets (abbrev.).
56. A girl's name (an unusual spelling, so be careful).
57. Active; nimble.

Vertical

1. A broadleaf tree.
2. To perform, to carry out.
3. The charge for timber cut.
5. Second tone of the diatonic scale.
6. Defensive cover for the body.
7. A point of the compass.
8. To estimate the value of timber.
10. A form of the verb to be.
11. A beast of burden.

13. What makes the flivver go.
17. Nostrils (Latin).
19. Foundation.
20. To steal from (obsolete).
23. To strike or beat gently; to tap.
24. February (abbrev.).
25. Masculine proper name.
28. An important position on a timber sale.
30. A type of musical composition.
32. A grain.
33. A rodent.
35. A reptile.
40. Products of a mine.
42. An implement used by the Tongass Rangers.
43. To carry or haul.
44. What happens to a tree after it is killed by disease, insects, or fire.
46. Stylish (slang).
48. Near the stern of a vessel.
49. Master of Scientific Agriculture (Initials)
50. To tear.
52. A bone (Latin).
53. A printer's measure.
54. A conjunction.

PESTS AND PREDATORS

By Howard R. Flint, D-1

From Zon comes the thought that the whole question of planting in northern Minnesota is debatable unless a method is found for the control of snowshoe rabbits. Stebbing, a British forester, in his book, "British Forestry," published during the War, points out that in Britain one of the heaviest items in planting costs is the eradication of rabbits and the fencing of the plantation against their return. In the forest tree plantations of Nebraska, a crew that has been working for several months has trapped 2018 pocket gophers to protect the plantations. In the Flathead Forest in Montana a sample plot, selected for observations on the natural reforestation of burns, showed at the latest examination serious damage to 29 per cent of the 1 to 5-year old lodgepole pine, larch, and fir seedlings by rodents, presumably mice. On the Long Pines division of the Custer Forest in Montana careful observation leads to the belief that mice do far more damage to yellow pine seedlings than heavy grazing by cattle. In both Britain and Minnesota the smaller predatory animals have been very nearly exterminated through the efforts of gamekeepers, fur trappers, and poultry owners.

Of course, if we cooperate with the Biological Survey in the extermination of predatory animals, they will cheerfully cooperate with us in the extermination of the rodents which dead predators can't keep in check. The question occurs, wouldn't it be cheaper in many localities to cooperate with the predators a bit in return for their natural check on the rodents? The damage done by the predators is easily reduced to dollars and cents, and it is quite a tidy sum in certain localities. The damage done by the rodents is difficult, probably at present impossible, of calculation for lack of data, but in certain regions, northern Minnesota for example, remembering Britain's experience, a few lynx, bobcats, skunks, mink and weasels may be better forest citizens than so many rabbits. Probably the most effective enemy of Zon's rabbits is a recurring epidemic disease, which has at times killed off millions of them in a season. Next in the order of their effectiveness as rabbit destroyers come lynx, bobcats, owls, mink, marten, skunks, weasels, Indians, and settlers. The Indians and settlers have greatly decimated all of the other rabbit eaters without themselves becoming very great factors in rabbit control. Maybe if legal protection could be taken off the rabbit and placed on the furred predators, the troublesome rabbit crop could be made to appear later as a valuable crop of fur, the balance will be restored and everyone made happy. Another hope for Zon's plantations may lie in the epidemic disease, if it can be directed. After all, the major asymptote of the population parabola of snowshoe rabbits is a little hard to compute, predict, or understand. Why haven't they become strikingly or destructively abundant in the Forests of Montana or North Idaho? They are present on every one of these Forests. Maybe Old Man Coyote and Great Horned Owl can answer. Maybe again, but it scarcely seems probable, it's just lack of suitable subsistence supplies. Quien sabe?

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WASHINGTON NOTES

Living Christmas Trees: "There has been a custom for years among French families," says AMERICAN FORESTS AND FOREST LIFE, "to replant Christmas trees after the annual celebration is over.

"Peasants and village people take the tree up carefully, with plenty of soil around the roots, and care for it tenderly during its elevation to the symbol of Christmas happiness. Later it is carried out reverently into a little garden and replaced with other trees of by-gone Christmases. This practice of the French people may have been born of French thrift, but it is pleasanter to believe it sprang from their imagination and veneration for the living symbol."

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Is Sawdust "Waste?" According to the SOUTHERN LUMBERMAN, a Boston firm which imports tropical timbers is selling sawdust from cedar logs at $160 a ton to be used in making anti-moth compounds. Reduced to solid wood, this is something like $200 per M. board feet. Which is waste, the sawdust or the lumber?

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FOREST EXPERIMENT STATIONS

A Young Seed Producer: The silvicultural requirements for the cutting of longleaf pine specify that two seed trees be left to each acre to insure a future stand. Seed trees are defined as "Longleaf pine trees, not less than nine inches in diameter at four and one-half feet from the ground, healthy, as young as possible, and with vigorous crowns."

Sometimes much smaller trees are found that make very good seed trees, as is shown by a tree located on the Powell tract at Starke, Florida, managed by the Southern Forest Experiment Station. This tree measures five inches in diameter at four and a half feet from the ground, and is eighteen feet in height. A ring count shows the age to be fourteen years. In the 1923 season the tree bore two mature and forty-two immature cones. In the 1924 season thirty-eight of the cones matured and bore seed.

The cones have been collected and the seeds will be tested for their viability and germinative properties.--H.S.W., So.For.Exp.Sta.

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Is There a Permanent Low Pressure Zon at St. Paul? The Appalachian Forest Experiment Station has just completed a study of the movement of storm centers during the fall fire season. The unusually dry season in the Southern Appalachian region is explained by the passage of storms across Northern United States and Southern Canada during this period. Five of these low pressure disturbances passed across Minnesota in the vicinity of St. Paul, one being diverted from a position over Northeastern Nebraska. This storm promised, from its course, to bring some relief to the Appalachian region when it was influenced by rising air currents in the Saint Paul region and changed its course to cross Canada. The local cause of low pressure and consequent rising air currents sufficient to converge the courses of five storms in so brief a period should be of interest to the Lake States Forest Experiment Station at St. Paul.

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DISTRICT 1 - NORTHERN DISTRICT

What About the Flag? If what I have observed holds good throughout the Service, the men who take down the flag at night are the exception rather than the rule. Doubtless this is due to thoughtlessness mostly, but since the instructions were issued six years ago (O-Improvement Circular Letter of June 21, 1918), perhaps there are some men who have never had them brought to notice. The new Administration and Protection Manual, page 34, also covers it.

A question which comes up is what to do at temporary stations or permanent headquarters of Rangers who have no families and are going away for several days. Either the flag must stay up through the night or else not fly in the daytime. The instructions do not seem to cover this by direct wording. Should it be left out day and night, cracking in the breeze or hanging limply against the flagpole, awaiting the Ranger's return, or should it be taken down and safely tucked away in the house or the box attached to the bottom of the pole, leaving visitors and passers-by to wonder why our lack of patriotism? Personally, I believe it should be put away before the journey; that hoisting and lowering the flag should be something of a ceremony, a part of each day's acknowledgment of the goodness of our cause and our country, and that without that, simply flying the flag is not in the same degree the mark of patriotism. How shall this point be decided? What think you?

And anyway, when you wake up in the night hereafter and hear the "Grand Old Rag" snapping in the gale, may your conscience not let you rest until you roll out and take it down, and may you never rise and find it waving that you do not in penance lower and raise it again for the good of your soul and to remind you not to forget.--T.S.

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Larsen Leaves: Julius A. Larsen, for many years in research work in this District, has resigned to accept a teaching position at Iowa State College at Ames. Mr. Larsen has had broad training and experience in forestry and has traveled and studied in Norway, Denmark, and Germany.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

An Unusual Camp Fire Sentence: Judge Symes of the Federal Court in Denver recently sentenced four school boys who left a camp fire burning in the mountains of Colorado to deliver an oration, of not less than 15 minutes duration, on the subject of carelessness with forest fires before the schools where they were in attendance. This sentence avoids any undue hardship on the parents of the boys, but at the same time will impress them with the seriousness of their offense before they have completed the penalty imposed.

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Our First Offer of a donation of forest-producing land, under the Clarke-McNary Act, has been received. This offer covers 160 acres of very fine yellow pine land with a heavy stocking of reproduction and poles in the Harney Forest. The donor, who is a very old man, desires to retain his fences around the tract and to pasture there, during the remainder of his life, an old team to which he is very much attached, having used them for many years. This area is located in a working circle where the full sustained yield is being cut.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

As a Trapper Mr. Crites Makes a Good Chief of Maintenance: Word has been received from the Kaibab Forest that Mr. W. B. Crites, Chief of Maintenance, had an interesting experience with a coyote. He set a trap and was successful in catching a half grown animal. He evidently had made up his mind to make a pet of the animal and endeavored to stroke its head. The coyote responded to the kindness by giving Mr. Crites a severe bite on the hand. Mr. Crites became quite concerned as he thought he might be poisoned by the bite, but the coyote was the one who suffered, as it was dead in fifteen minutes.

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Round-up: Early in November a round-up of trespassing horses was made on the Brownlee district of the Weiser. Eighty-one horses were gathered by Ranger McGuinness but 17 escaped or were spirited away, 64 head being brought into Cambridge and turned over to the Deputy Sheriff. Some of the horses were "donated" by the owners and turned over to the predatory animal men for "bait." Several trespass cases have resulted of which 6 have been settled for total payments of $50.00. About 40 head are being advertised under the State law and unless claimed and damages paid will be sold on January 11. Sixteen of the horses being held belong to A. E. Ensley, an old trespasser against whom we have an unsettled judgment. The U. S. Marshall has agreed to attach the horses and sell them to satisfy the judgment. Mac says he has had enough horse round-up to last him the rest of his natural life.

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DISTRICT 5 - CALIFORNIA DISTRICT

Why Old Mountain Trails Follow Ridges: Many Forest officers have wondered why the old mountain trails in California so frequently follow the steep high ridges instead of the more easy water grades. A very plausible reason for this is given by Stephen Powers in his book on the Indians of California, written in 1877.

"Most people who have traveled in the frontier regions of California, especially if they were on foot, have probably been no little worried and exasperated at the perversity with which the roadmakers have run the trails and roads over the summits of the hills. Often have I said to myself in my hot impatience, 'If there is one hill in all this land that is higher than another, these engineers and graders are never content until they have carried the road over the top of it.' But the Indians are more responsible for this than our engineers. Time and again I have wondered why the trails so laboriously climb over the highest part of the mountain; but I afterward discovered that the reason is because the Indians needed these elevated points as lookout stations for observing the movements of their enemies. They ran the original trails through the chaparral. The pioneers followed in their footsteps and widened the path when need was, instead of going vigorously to work and cutting a new one on an easier grade, and in process of time when a wagon road became necessary they often followed the line of the ancient trail. When the whole face of the country is wooded alike, the old Indian trails will be found along the streams; but when it is somewhat open they invariably run along the ridges, a rod or two below the crest - on the south side of it, if the ridge trends east and west; on the east side, if it trends north and south. This is for the reason, as botanical readers will understand, that the west or north side of a hill is most thickly wooded. The California Indians seek open ground for their trails that they may not be surprised either by their enemies or by cougars and grizzly bears, of which beasts they entertain a lively terror."--L.A.B.

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DISTRICT 6 - NORTH PACIFIC DISTRICT

The Kick-back of a Work Plan: Supervisor Neal of the Umpqua says that one farmer, who served as fireman on the Umpqua this summer, has had the work plan idea thoroughly sold to him. The District Ranger prepared for him a set of instructions showing how, when, and where he was to improve his station without interfering with fire protection work. Mr. Farmer says the first thing he will do when he goes home will be to make a work plan for his farm. The kick-back is that if it is a success he won't come back next year; if a failure, he'll come back but won't have his faith in work plans. Heads he wins, tails we lose.

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Some Summer Resort: Eighty-one thousand, nine hundred and seventy people used the Wenatchee Forest to play in last year, while an additional 600,000 motored over its roads. This makes the total estimated recreation visitors 681,970.

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DISTRICT 7 - EASTERN DISTRICT

A Conviction Secured: Robert Weldon, Yell County mountaineer, was found guilty in Circuit Court at Danville, Arkansas, on December 3 of the murder of W. D. "Bud" Jones, veteran Ranger of the Arkansas National Forest, and was sentenced to life imprisonment. The conviction of Weldon terminated a three-day trial.

Ranger Jones was slain on the night of August 28. His body, riddled with bullets and badly mutilated with some sharp instrument, was found beneath a pile of gunny sacks the following morning in Weldon's yard. Weldon had disappeared. After several days' search had been conducted for him he suddenly returned to his home and surrendered to the county sheriff.

Ranger Jones left home on the morning of August 28 to locate a new Forest development road. It was the contention of the State that Weldon killed Jones because of personal opposition to the new road which would pass Weldon's place. Weldon had an unsavory reputation, had served a term in the penitentiary for cattle stealing, and was suspected of activity in moonshining.

Weldon's defense was that about 8 o'clock on the night of August 28 two men came to his home and called him to his front gate and that one of them struck him over the head with a blunt instrument. Weldon said he was rendered unconscious and that when he regained consciousness he was lying beside the dead body of Jones. Weldon said he secured his gun and pursued the men getting close enough to fire several shots at them. He claimed that these men brought Jones' body to his place.

Local public sentiment was apparently very much aroused over this crime. The Hot Springs Era in an editorial of December 4 points out that Weldon will probably be made the object of appeals for clemency a little later on and sounds a note of warning to those who may be inclined to let sentiment and sympathy get the upper hand of their better judgment when petitions for pardons are being passed around.

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Service Bulletin

U. S. FOREST SERVICE
(Contents Confidential)

Vol. VIII. No. 52. Washington, D. C. December 29, 1924.

OPPORTUNITIES FOR FORESTERS IN GRAZING WORK

By W. R. Chapline, Washington.

As early as 1907 the Forest Service recognized the importance of having men specially trained for grazing work study the problems confronting the administration of grazing on the National Forests. Since that date three grazing experiment stations have been established; men have studied special problems; grazing reconnaissance for the development of permanent grazing management plans has covered over 23 million acres of National Forest land; several trained grazing men are in Supervisors' positions, and 33 are assigned to the Districts or Forests for special administrative or reconnaissance work.

There is much investigation needed before all the principles of grazing management are developed or the grazing adjustments necessary to insure adequate reforestation known. This is a work which must eventually be greatly expanded. There is at present, however, a job already upon us which cannot await results of needed investigations and which will require many more men. This is the big job of determining the application to specific areas of principles already developed and securing the results in administration.

In an effort to develop an adequate force for handline the work about 8 to 10 new special grazing men have been taken in each year for a number of years. There are now 48 men within the Service who came in from the technical grazing examinations. Twenty-seven colleges and universities have entered into the training of these men; 80% of them are forestry trained; 60% served as rangers or administrative guards before taking up special grazing work; and only 6%, though college trained, had not had forestry training or administrative experience. The organization thus enjoys the benefits accruing from practical field experience and from a wide diversity of technical training, and is moreover thoroughly imbued with sound silvicultural sympathies.

Of those grazing men who have left the Service and entered State or College work, one is now director of a state Agricultural college experiment station, one an assistant director, one is the head of a forestry department, three are in charge of departments of range management, and one is an Assistant State Forester. Within other Government work several are found, including the Chief of Reindeer Investigations in Alaska, Chief of the Office of Weed Investigations in the Bureau of Plant Industry, Chief of Stock Raising Homestead Classification in the Geological Survey, and Game Warden in Charge of the Montana Bison Range. In the field of private endeavor several are employed by lumber companies, others are livestock owners, and still others range through many vocations to as far a cry as an owner of a hotel.

The grazing phase of forestry work needs many good men. The Service desires especially foresters with sound botanical training and preferably with experience in handling livestock. It is hoped that other technically trained foresters, including those now in the Forest Service and those yet to join, will consider the advisability of entering the grazing field of Forest Service endeavor.

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DISTRICT FORESTER REED RESIGNS

In honor of Franklin W. Reed, whose resignation as District Forester is effective December 31, a farewell gathering of D-7 folks was held on the afternoon of December 20. In behalf of the entire District organization, afield and in Washington, a Hamilton watch was presented to "F. W." It was thus inscribed:

"F. W. R.

'Your associates in the Eastern
National Forest District will ever
remember you with sincere affection and deep appreciation of your
worth.

December, 1924."

Mr. Reed entered the Forest Service in February, 1902, as an Assistant Forest Expert. In December, 1908, he became Assistant District Forester of District 4, and later Associate District Forester. In August, 1911, he was transferred to the Branch of Operation in Washington, D. C. He was made Assistant District Forester in District 7 in July 1914, and in June, 1919, took over the full duties of District Forester of the Eastern National Forests.

Mr. Reed will engage in private professional forestry in the East and South, with headquarters probably in Washington.

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AUTO - BE - MOBILE?

By Henry L. Spencer, Gunnison.

It isn't often in these times of plan madness, high geared efficiency days, that I rise to a buzzing mosquito, but like the helpless worm to the fish - or the tender green grass to the cow - this mobility stuff is too appealing.

There are two distinct angles to the question:-Good th the Service and personal equations, and since organization above self should be the aim of all let us analyze the work of Supervisors and Rangers from this standpoint. First of all they must know their stock - and next, what to do with it. Doesn't it give you a pain to call for a pair of socks in a dry goods store and see the clerk rummage around for five minutes among the ladies' corsets before he finds what you want? Just so it gives a would-be patron of the Service a pain when he calls for an article of our stock and we don't know where to find it - let alone tell him how to get it, and all the little details of physical obstacles, markets, and what not.

Fourteen years ago I stated in a personal letter to W. J. Morrill - now State Forester of Colorade - that I believed three years on a District were necessary before a Ranger was in a position to accomplish the most good. The intervening fourteen years have strengthened this belief immensely. In this lapse of time I have seen as many as seven Supervisors attempt to warm up the big chair on one Forest - and four or five very often - while the Ranger trail to the Big-free National Forest has become so worn that even a nabob can't get lost on it, with a resultant painful amount of rummaging around among the corset boxes - when what you wanted all the time was a pair of socks.

The point of transferring men who have developed ability to fit reclassification jobs commensurate with said ability seems to me to be an open-and-shut case of putting the cart before the horse. The man who has the ability and does develop a Forest to the top of the ladder knows his stock and knows what he is doing to brink about this much desired result. Then why not create a reclassification job to suit the man and leave him where he is? How many of us have been on a Forest so long that we can not see a big constructive work to do on that Forest or District? I believe I can safely say without exception that all hands that go up are dead sticks. Of course Supervisors will always be developed to fill the Assistant District Forester or District Forester grade and Rangers will be developed to fill the Supervisor grade, but if we have a Ranger or a Supervisor in the right niche I can not see the point in transferring him before he has an opportunity to prove what he can do with the Forest areas he has under his charge.

This mobility stuff has no place, I believe, in European Forestry practice. The other night I spent an hour drawing out an old Italian who had emigrated to America in middle life on the length of time the personnel of Italy's Forests remained in one place. The gist of the inquiry finally seeped in, and with an eagerness born of understanding he dramatically exclaimed, "Bad man, rascal, drunk, go damn queeck - Good man stay long time - till he die."

Six months ago I had a long talk with a German who had served in his boyhood under a German Uber-Forster. His word picture of the home life and privileges of the equivalent to our Ranger made me feel that the German Government had knocked the mobility idea for a cuckoo.

I sometimes wonder if we are not drifting back, by a very tiring and circuitous route, to the exact point we have tried for so many years to get away from - judging by long distance paper records. One of the most striking criticisms I have ever heard of a Ranger was in 1906 by a large and successful sheepman called "Old Perk" - "Now Uncle Sam is sending out a paper collared Ranger who would get lost in a ten acre patch of sagebrush, to tell Old Perk how to run his business."

If we kept mobilizing brilliant dreams of auto travel over goat trails - autosuggestions of applying bank president work plans to Rangers - and auto-be-mobile - will not the Ranger and Supervisor automatically become self-lubricating, double-action humdingers who will get lost in a ten acre patch of sagebrush? I wonder!

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PUBLICITY

By P. Keplinger, D-2

You know the old saying "There are two sides to every question." That is probably true but for some questions it doesn't say half enough - there are ever so many more than two sides. Take publicity for example: a real publicity shark can see the publicity side to everything. It is sometimes amazing to the uninitiated how they do it. Now last Sunday at church, the preacher signaled for us to stop singing, but I was looking out of a window and kept right on. Everybody turned and looked at me and grinned. That embarrassed me awfully, but had I been properly trained I would have swelled up at the thought, "See what a lot of publicity I'm getting." Again, the other day as I hurried out of the Federal Building, I slipped, fell, and rolled down the steps. I got up, looked around, and was really glad that only three people were looking.

Old fashioned folks are like that. It's hard to get the modern point of view. When we slip-up we feel embarrassed or ashamed and try to hide it. Not so the real publicity shark! For example, last fall they had a big slip-up on a Forest in another District and burned up some forty thousand acres. How did they take it? Feel badly? No! They bragged about it. See what we've done! More publicity than all you fellows ever had in all your life! Reams and reams of it! Press Clipping Bureau swamped! Total column inches nearly two hundred yards and this only from the big papers. Combined, would equal 45 newspaper pages, wasn't it great?

Of course I realize that that is the proper up-to-date attitude, but we old timers will never get it. Don't you know I really can't help feeling glad that D-Z didn't get all that publicity and, further, I don't care if we never do.

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ANSWER TO LAST WEEK'S CROSS-WORD PUZZLE

1 A	2 D	Z	▨	3 S	▨	4 B	5 R	6 A	7 N	D	▨	8 A
9 S	O	▨	10 A	T	11 A	▨	12 E	R	E	▨	13 G	P
P	▨	14 B	R	U	S	H	▨	M	▨	15 S	A	P
16 E	17 N	▨	18 E	M	S	▨	19 B	O	20 B	▨	21 S	R
22 N	A	23 P	▨	P	▨	24 F	A	R	E	25 D	▨	A
▨	26 R	A	V	A	G	E	S	▨	27 R	A	M	I
28 S	E	T	▨	G	▨	29 B	I	30 S	O	N	▨	S
31 C	S	▨	32 O	E	33 R	▨	34 S	O	B	▨	35 B	E
A	▨	36 P	A	▨	37 A	L	▨	N	▨	38 T	O	▨
39 L	40 O	▨	41 T	42 O	T	▨	43 T	A	44 R	▨	45 A	46 T
47 E	R	48 A	▨	A	▨	49 M	O	T	O	R	▨	O
51 R	E	F	52 O	R	53 E	S	T	A	T	I	54 O	N
▨	55 S	T	S	▨	56 M	A	E	▨	57 S	P	R	Y

WASHINGTON NOTES

Associate Forester E. A. Sherman returned to the Washington office December 19 after an absence of six weeks, during which period he acted as Chairman of the Board of Fire Review which investigated the disastrous fires of the past season on the Angeles National Forest in California and made a study of protection plans for that Forest in the future. The Board's report, which was unanimous, was signed by the eight investigating members, four of them Forest officers and four California civilians, and was submitted to the Forester immediately upon the Chairman's return. Upon approval its entire contents will be made public. Mr. Sherman reported that the Board at first encountered an atmosphere of skepticism and hostility in Los Angeles, the feeling seeming to prevail that it was organized merely for the purpose of executing an official whitewash. However, as the investigation proceeded, the Board in spite of all obstacles endeavoring to make its investigation thorough and impartial, this attitude changed until finally local cooperation became general and cordial. The report is being mimeographed and will be available for limited distribution upon approval by the Forester. Forest Supervisors having important fire problems will find it both meaty and interesting.

Major Kelley has just returned to Washington from an inspection trip of several months. He spent the early part of the summer in District 1 and from there went to District 5. Practically all of his time was spent on fires, including work with the Board of Fire Review, which covered most of California and which was enlarged to deal with the San Gabriel fire on the Angeles Forest. About three weeks' time was spent in public hearings and discussions on the Board of Review Report, which is themost important document in the history of the development of fire control on the National Forests.

'Gratulations! A free grazing permit has been issued to William R. and Eve Chapline on the Washington allotment in order to take care of an increase in the local bunch. At present the young thing is long-eared and unmarked but will be branded Barbara in the near future.

Note for Bill Chapline: The Ed. still smokes occasionally.

DISTRICT 1 - NORTHERN DISTRICT

A preliminary analysis of District 1 fires for the 1924 season gives a good idea of the relative importance of fires arising from the various causes. The tabulation given below lists the various causes of fires, and shows the number of fires of each class which resulted from the various causes:

Cause	Class			Total	Percent of total
	A	B	C		
Lightning	516	173	47	736	49
Railroads	70	22	9	101	7
Smokers	91	58	24	172	11
Campers	126	21	8	156	10
Brush burning	23	42	51	115	8
Lumbering	10	16	10	36	2
Incendiary	105	22	18	146	10
Miscellaneous	25	14	7	46	3
Totals	966	368	174	1508	100
Percent of Total	65	24	11		100

It will be noted that smokers', lumbering, and brush burning fires are found to be heavily represented in the Class C column. The reasons for this are at least partly apparent. Smokers' fires occur without warning and in places where fires are wholly unexpected. Lumbering and brush burning fires show a large percentage of Class C, in this case because most of them were pre-season fires which occurred before the protective organization was placed. It is apparent that the lumbering and brush burning fire situation should not be a particularly difficult one to prepare for and meet. This is not true, however, of the smokers' fires, and the remedy for them is still to be found.

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DISTRICT 2 - ROCKY MOUNTAIN DISTRICT

District Two Game. The annual game reports of D-2 for 1924 show satisfactory increases in elk, deer, and black and brown bear as well as beaver. The influence of the game refuges established in recent years appears to be favorable, and the public generally is taking keener interest in wild life questions, with the result that there is better observance of game laws and better cooperation between game authorities and the public. This is partly expressed in quite a large number of local game protective associations which we now have - between 55 and 60 in Colorado alone.

Special attention the past year has been given to the matter of preventing law violations through handling and disposing of illegal cases, the sale of licenses by Forest officers in more remote places where the public could not be conveniently served otherwise and through the examination of licenses. The last was done in an effort to educate the public in expecting to be called upon to show their authority to hunt and fish. One hundred and forty-nine cases were handled by Forest officers or reported to State authorities; 1442 licenses were sold by 47 officers and 2519 licenses examined. There is no better way to forestall breaches of the law than in calling upon people to show their licenses. They never forget it and are careful to warn their friends and neighbors to be prepared. There appears to have been an excellent spirit of cooperation between local officers and local State game authorities.

In the matter of fish planting, Forest officers took care of 1,856,700 fry from federal hatcheries and 1,339,000 from the State hatcheries, a total of 3,195,700. In addition to this, 515,000 were planted on the Forests by individuals of clubs.

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DISTRICT 4 - INTERMOUNTAIN DISTRICT

Honorable Mention: Down on the La Sal Forest they average about one fire a year. Forest values are not extraordinarily high and the hazard is not great. Nevertheless they have the right spirit as shown by the following record:

Man-caused fires----3; Arrests----3; Convictions----3.

Sagebrush and Sagebrush: In southern Utah there is a species of sagebrush much relished by sheep. It bears a striking likeness to the common black sage (Artemesia tridentata) which, however, is not a good sheep feed. The common black sage grows, as a rule, from 18 inches to several feet in height, but this other sage relished by sheep is more often only about a foot high with flower stocks extending about six inches higher. A study of herbarium material in this office indicates that this species is Artemesia nova. That makes one more species for you to put in your mental herbarium.

Those S-22's are sales at cost. Figures in this District show that nearly everywhere the cost of administering these sales is far in excess of the cost per thousand charged for timber. In many cases this is perhaps caused by failure of the man on the ground to get his S-22 business organized so that he can handle it cheaply. Whenever a man comes and wants a thousand or so of this material, the Ranger goes out and marks it, making his whole schedule of work a slave to a few S-22 permittees. The business runs him instead of his running the business. There should be a careful study of this problem this winter and every Ranger having much S-22 work should endeavor to get it organized, because if it cannot be arranged so that the cost of administration falls within the estimated dollar limit, it is going to be necessary to make the permittee pay for the kind of service that is given him. For, as remarked at the beginning of this item, S-22 sales are sales at cost.

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DISTRICT 5 - CALIFORNIA DISTRICT

CHARLES HOWARD SHINN

April 29, 1852 - December 2, 1924

On Tuesday night, December 2, at his daughter's home in Ukiah, Charles Howard Shinn passed on. The funeral was held there Thursday afternoon at 2:30.

Thus much the bare record. But what it means to the California District of the Forest Service, and to all foresters and the cause of forestry in our country, words only haltingly express. No one has said more in few words for him than did the "Sierra Ranger," on that Forest to which Mr. Shinn gave longest and most peculiarly his labor of love, when the Shinn place at Northfolk was offered for sale: "That hits - doesn't it? A great deal can be crowded into one small sentence - respect and love, and a tightening of the throat. - Peace Cabin is for sale. But the highmindedness, the fine courage, the inspiration that have come from Peace Cabin, and that are a part of our hearts and purpose, are not in the market. We own the real Peace Cabin. Peace Cabin is not for sale!"

And now Mr. Shinn has passed. But, as truly, his world can never lose him. Other men may serve the cause of forestry in positions of more far flung responsibility, but few more significantly, and none ever more truly, to his last ounce of energy and life. And to none, we venture, is it given to contribute to his fellows in larger measure of those most priceless possessions of men or organizations, the invisible and eternal foundations of character, spoken of by the "Sierra Ranger."

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DISTRICT 6 - NORTH PACIFIC DISTRICT

Back from Land of Mountain Goats: Surveyor Lage Wernstedt spent a very successful field season on the Chelan National Forest, where he had been making a photo-topographic survey to be used as the basis for a new Chelan base map.

During the season Wernstedt occupied 68 points, an average of one point to every one and one-half day's working time. The Northern Chelan is exceedingly well suited to this method of surveying and a very excellent map should result.

Lage entertained himself and guests with a portable radio, by means of which he was able to tune in on evening concerts. The instrument worked perfectly until the horse, which packed it along with the transit and other instruments, decided to commit suicide by jumping over a 300-foot cliff.

"Ranger Kiddie" Photo Contest: This photographic contest conducted by the American Forestry Association last spring had several entries from D-6. In spite of the very short time allowed to get photos in to Washington, D. C., third prize was won by little Miss Vera Thompson, daughter of Ranger Thomas Thompson, of the Mount Baker Forest. Among those who gave the prize winners a close race were: - Miss Betty Cleator (daughter of Recreation Engineer F. W. Cleator), and the six healthy and fine looking children of Ranger John B. Brender, of the Wenatchee Forest. Had there been more time in which to collect photos, there is no doubt that D-6 would have taken all prizes!

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DISTRICT 7 - EASTERN DISTRICT

Lumber Company Experiments with Good Forestry: The Dierks Lumber Company has expressed its intention of cutting a block of its timber within the Arkansas National Forest under the same practices as the Forest Service is now using on timber sales. This is to be done as an experiment, and if it works out in a satisfactory way no doubt the company will begin practicing broader principles of forestry on its holdings in Arkansas.

Travel by Auto on Pisgah Increases: Installation of traffic counters on all the main highways leading into the Pisgah National Forest in time for the 1926 spring and summer season is being considered.

Approximately 17,358 people and 3,766 automobiles visited Mount Pisgah during the past spring and summer season. Of this number 12,358 visitors and 2,766 cars ascended the peak via the Pisgah motor road from the Asheville side, while approximately 1,000 cars and 5,000 people went up on the Brevard side of the mountain. The season ran from April 1 to November 30 with a record showing a substantial increase over the previous year.

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